

(6 pages)

Reg. No. :

Code No. : 6820

Sub. Code : KCSM 23

M.Sc. (CBCS) DEGREE EXAMINATION,
APRIL 2017.

Second Semester

Computer Science

ADVANCED DATA BASE MANAGEMENT SYSTEM

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. A relational database consists of a collection of
(a) Tables (b) Fields
(c) Records (d) Keys
2. A _____ is a property of the entire relation, rather than of the individual tuples in which each tuple is unique.
(a) Rows (b) Key
(c) Attribute (d) Fields

3. Using which language can a user request information from a database?

(a) Query (b) Relational
(c) Structural (d) Compiler

4. To remove a relation from an SQL database, we use the _____ command.

(a) Delete (b) Purge
(c) Remove (d) Drop table

5. The _____ clause allows us to select only those rows in the result relation of the _____ clause that satisfy a specified predicate.

(a) Where, from (b) From, select
(c) Select, from (d) From, where

6. If the attribute phone number is included in the relation all the values need not be entered into the phone number column. This type of entry is given as

(a) 0 (b) -
(c) Null (d) Empty space

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7. The _____ connective tests for set membership, where the set is a collection of values produced by a select clause. The _____ connective tests for the absence of set membership.
- (a) Or, in (b) Not in, in
(c) In, not in (d) in, or
8. A Delete command operates on _____ relation.
- (a) One (b) Two
(c) Several (d) Null
9. What type of join is needed when you wish to include rows that do not have matching values?
- (a) Equi-join
(b) Natural join
(c) Outer join
(d) All of the mentioned
10. Relational Algebra is a _____ query language that takes two relation as input and produces another relation as output of the query.
- (a) Relational (b) Structural
(c) Procedural (d) Fundamental

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PART B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Distinguish between Data base systems and file systems.

Or

- (b) Write a short note on Database Languages.

12. (a) What are the fundamental relational algebra operations? explain with example.

Or

- (b) Explain in detail about Query by example.

13. (a) List out the Design phases used in the Database Design. Explain with example.

Or

- (b) Briefly explain the 1NF, 2NF.

14. (a) What are the transaction properties that database system maintains? Explain.

Or

- (b) Briefly explain the serializability.

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[P.T.O.]



15. (a) List out the Advantages and Disadvantages of distributed databases.

Or

- (b) Distinguish between Object Oriented and Object Relational Databases.

PART C — (5 × 8 = 40 marks)

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Describe about View of Data in DBMS.

Or

- (b) Draw a neat diagram of Data base architecture and explain its components.

17. (a) Describe about extended E-R features.

Or

- (b) Explain decomposition using functional dependencies.

18. (a) Explain Tuple relational calculus with example.

Or

- (b) Describe about Bit Map Indices.

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19. (a) (i) Explain the Components of ER diagram.

- (ii) Explain mapping cardinalities.

Or

- (b) Describe about (i) Deadlock Handling
(ii) Two phase locking.

20. (a) Differentiate between the homogeneous and heterogeneous data bases.

Or

- (b) Illustrate distributed data storage with example.

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