Reg. No. : | | | | | | | | | | |

Question Paper Code: 54085

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2017

Fourth Semester

Information Technology

15UIT405 - DATABASE MANAGEMENT SYSTEMS

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. In a relation between the entities the type and condition of the relation should be specified. That is called as _____attribute.

   (a) Descriptive (b) Derived (c) Recursive (d) Relative

2. The minimal set of super key is called

   (a) Primary key (b) Candidate key
   (c) Secondary key (d) Foreign key

3. Functional Dependencies are the types of constraints that are based on

   (a) Key (b) Key revisited
   (c) Superset key (d) None of these

4. A lock that allows concurrent transactions to access different rows of the same table is known as

   (a) Database-level lock (b) Table-level lock
   (c) Page-level lock (d) Row-level lock

5. The file organization that provides very fast access to any arbitrary record of a file is

   (a) Ordered file (b) Hashed file
   (c) Unordered file (d) B-tree

PART - B (5 x 3 = 15 Marks)

6. List any six applications of DBMS.

7. Mention the Attribute types and Give the forms of triggers.

8. What are the properties of Armstrong's axioms are used to infer FDs from others?

9. What are the factors to be taken into account when choosing a RAID level?

10. List out the techniques to be evaluated for both ordered indexing and hashing.

PART - C (5 x 16 = 80 Marks)

11. (a) Draw the E - R diagram for Banking system. (16)

Or

(b) Draw neat sketch Database system architecture. Explain in detail. (16)

12. (a) How will you perform modifications using relational algebra? Explain in detail. (16)

Or

(b) Build a database management system application for banking system. (16)

13. (a) Construct 1^{st}, 2^{nd} and 3^{rd} normalization techniques with sample relations. (16)

Or

(b) Explain in detail about multi valued dependency and join dependency. (16)

14. (a) Discuss the concept of serializability. Explain in detail. (16)

Or

(b) Enlighten in detail about Two-Phase Locking Protocol. (16)

15. (a) Explicate in detail about RAID levels. (16)

Or

(b) Explain in detail about static hashing. (16)

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