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## Question Paper Code : 60383

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2016.

Fourth Semester

Computer Science and Engineering

CS 2255/CS 46/CS 1254/080250009/10144 CS 406 — DATABASE MANAGEMENT SYSTEMS

(Common to Information Technology)

(Regulations 2008/2010)

(Common to PTCS 2255/10144 CS 406 — Database Management Systems for B.E. (Part-Time) Third Semester — Computer Science and Engineering, Regulations 2009/2010)

Time : Three hours                                      Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1.  What is the purpose of Data base System?

2.  In what way Database users can be differentiated?

3.  List out any two keys.

4.  Give the difference between ODBC and JDBC.

5.  How good is BCNF?

6.  Define Non-loss decomposition.

7.  Define save point.

8.  Define ACID properties.

9.  Define RAID.

10. Write a short note on Database tuning.

PART B — (5 × 16 = 80 marks)

11. (a)  With a suitable neat diagram, explain the database system Architecture.

Or

(b)  Compare and contrast various data models.

12. (a) Explain the :

   (i) Six basic operators in Relational Algebra. (8)

   (ii) Triggers. (8)

Or

(b) Discuss about :

   (i) Aggregate function and Outer join. (8)

   (ii) Distributed databases and client server databases. (8)

13. (a) Explain Join Dependencies and fifth normal form. Provide examples.

Or

(b) Explain First, Second and Third normal forms. Provide examples.

14. (a) Write down any three recovery techniques in Transaction Management.

Or

(b) Discuss about Locking and Concurrency problem. Also write a note on locking protocols.

15. (a) Explain Static and Dynamic Hashing techniques.

Or

(b) Describe in detail B and B+ tree Index files.

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