KUMARAGURU
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Register Number:……..

MCA DEGREE EXAMINATIONS: NOV/DEC 2014

(Regulation 2009)

Fourth Semester

MASTER OF COMPUTER APPLICATIONS

MCA524: Advanced Databases

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-

PART B (10 x 2 = 20 Marks)

1. What is the role of database administrator?
2. Mention any four advantages of database approach.
3. Define functional dependency.
4. What is the dependency preservation property for decomposition? Why is it important?
5. List the different steps followed during query optimization.
6. State the goal of tuning.
7. Differentiate between row-level and statement –level active rules.
8. What are the functions that need to be provided by distributed database in addition to those of a centralized DBMS?
9. Mention the different ways of specifying strings and text in PHP.
10. How data warehouse differ from database?

PART C (5 x 16= 80 Marks)

11. a) With neat sketch, discuss the database system structure.

(OR)

b) State the five main advantages of using a DBMS. Explain with an example.

12. a) Discuss the purpose of Boyce-Codd Normal form and describe how BCNF differs from and is stronger than 3NF.Illustrate your answer with an example.

(OR)

b) List the phases of database design and implementation for large databases and explain.

13. a) (i) Mention and explain the steps followed to process a high level query. (8)

(ii) Discuss the cost components for a cost function that is used to estimate query execution cost. Which cost components are used most often as the basis for cost functions? (8)

(OR)

b) (i) Discuss the decision made during physical database design. (6)

(ii) List the guidelines for physical database design in RDBMS and explain. (10)

14. a) How times is represented in temporal databases and compare the different time dimensions with suitable example.

(OR)

b) What is the difference between distributed processing in computing systems and DDBMS? Under what circumstances would you choose a DDBMS over distributed processing? Explain.

15. a) (i) Discuss the five types of knowledge produced from data mining. (6)

(ii) Describe the characteristics of a data warehouse. (10)

(OR)

b) With a neat diagram, explain mobile database architecture.