Register Number: ….……

M.C.A DEGREE EXAMINATIONS: NOV / DEC 2010

Fifth Semester

MASTER OF COMPUTER APPLICATIONS

P07CAE06: Advanced Databases

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

Answer All Questions:-

PART A (10 x 2 = 20 Marks)

1. Write a relational algebra expression to find those customers who live in “Horrison”.
2. What do you mean by simple and composite attribute?
3. Define persistent collection?
4. Write the reasons for using concurrent execution.
5. What is mobile database?
6. Why mining of association rules are more complicated?
7. What is parallel database?
8. Define valid time in temporal database.
9. Name the two types of database security mechanism.
10. Why database tuning is necessary?

PART B (5 x 16 = 80 Marks)

11. (a) What are the different types of relational algebra operations? With suitable examples explain any four operations.

(OR)

(b) (i) How does BCNF differ from 3NF? Explain. (8)

(ii) What are functional dependencies? Discusses the inference rules for functional dependencies. (8)

12. (a) Write short notes on

(i) Type Hierarchies and Inheritance (8)

(ii) Unstructured complex objects (8)

(OR)

(b) How ARIES recovery algorithm works in order to recover database? Illustrate with an example.

13. (a) (i) What is content based retrieval? How multimedia sources is being retrieved based on certain objects? (8)

(ii) What are the applications of multimedia database? (8)

(OR)

(b) Explain about association rule with suitable example.

14. (a) What are the different ways of implementing deductive database systems? Explain in detail.

(OR)

(b) (i) List out the advantages of distributed databases. (6)

(ii) How fragmentation works for distributed database design. (10)

15. (a) What are the phases of database design? Discuss each phase in detail.

(OR)

(b) Briefly discuss about tuning of various physical database design decisions.

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