

(Please write your Exam Roll No.)

Exam Roll No. 0211492007

END TERM EXAMINATION

SECOND SEMESTER [BCA] MAY-2008

Paper Code: BCA-110	Subject: Database Management Systems
Paper Id: 20110	Batch (2005-2007)
Time : 3 Hours	Maximum Marks :75
Note: Q1. is compulsory. Rest of the questions have internal choice.	

Q1. (2.5 x 10=25)

- (a) Differentiate between physical data independence and logical data independence.
- (b) What is spanned record organization?
- (c) State various relational database design guidelines.
- (d) Illustrate normalization. - 2
- (e) Differentiate between composite & derived attributes.
- (f) Distinguish between Primary key, candidate key & super key.
- (g) Define referential Integrity constraint.
- (h) How do you get 3NF from 2NF?
- (i) Explain Hashing.
- (j) Define Audit Trail.

Q2. What is timestamp? How does system generate timestamps? (10)

OR

Write down all the steps of Entity Relationship to Table mapping. (10)

Q3. (a) What is deadlock & how can it be prevented? (5)
(b) What is 2 phase locking and 2 phase commit protocols. (5)

OR

What is an ER diagram? How is EER different from E-R model. Construct an ER diagram for banking enterprise covering all major activities. (10)

Q4. Explain different mechanism of concurrency control. Define Pros & cons of each. (10)

OR

Illustrate in detail about all Raid level. (10)

Q5. What is a join? Write all categories of joins (theta join, equi join, outer join, self join). (10)

OR

Consider a relation schema R(a, b, c, d, e, f) having functional dependencies. (10)

- A b → c
- b → a
- d → c
- e → a
- f → a

Normalise this relation upto 3NF.

Q6. Write SQL queries for: (10)

Fname	Lname	SSN	Address	Salary	DNO
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- (i) Retrieve first name, Last name of employees who work in Department number 5.
- (ii) Retrieve the employees whose salary is greater than 5000.

OR

Write SQL statements for the following table; (10)

Customer

Cust_id	Lname	Fname	Area	Phone
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Movie

Mv_no	Title	Type	Star	Price
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Invoice

Inv_no	Mv_no	Cust_id	Issue_date	Return_date
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- (a) Display the invoice information for customer 'a01' & 'a02'.
- (b) Find the movies of type "horror" and Comedy.
- (c) Print the information from invoice table of customer who have been issued movies in the month of September.