

(Please write your Exam Roll No.)

Exam Roll No. 061.....**END TERM EXAMINATION**

SECOND SEMESTER [BCA] MAY-JUNE 2009

Paper Code: BCA-110

Subject: Database Management Systems

Paper Id: 20110

(Batch: 2005-2008)

Time : 3 Hours

Maximum Marks : 75

Note: Attempt all six questions Q1. is compulsory. Questions have internal choice.

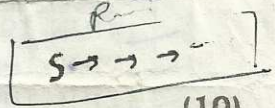
- Q1. (a) What are the various data models available for database systems?
 (b) What is the need for normalization? Define first, second and third normal forms.
 (c) Differentiate between DDL and DML commands.
 (d) What is the purpose of following schema objects?
 (i) Tables (ii) Views (iii) Synonyms
 (e) What is data dictionary?
 (f) What do you understand by transaction COMMIT and ROLLBACK?
 (g) What do you understand by ACID properties of database transaction?
 (h) What is distributed database? What is its significance? X
 (i) What are the limitations of SQL? X
 (j) What are functions? How are they different from procedures?

(2.5 x 10=25)

- Q2. What is an ER diagram? How is EER different from E-R model? Construct an ER diagram for hospital management system covering all major activities.

OR

Explain Generalization, Specialization and Aggregation.



(10)

- Q3. What is a Join? Write all categories of joins (equijoins, non-equijoins, outer joins, self joins).

OR

Briefly discuss the problems encountered in concurrent execution of transactions.

(10)

- Q4. Write a program to illustrate working of IF-THEN-ELSE. If a number is greater than the other, it swaps the two numbers otherwise it doubles them.

OR

What is the difference between ROLLBACK and ROLLBACK TO statements?

(10)

- Q5. How are implicit cursors different from explicit cursors?

OR

Explain two phase locking with suitable example.

(10)

- Q6. TABLE: CUSTOMERS

Name	Address	State	Zip	Phone	Remarks
True wheel	550 Hurker	NE	58702	555-4545	None
Bike Spec	CPT shrive	LA	45678	555-1234	None
Lc Shoppe	Home town	KS	54678	555-1278	None
AAA Bike	10 oldtown	NE	56784	555-3421	John-Mgr
Jacks Bike	24 Eglin	FL	34567	555-2314	None

P.T.O.

TABLE: PARTS

Partnum	Description	Price
54	Pedals	54.25
42	Seats	24.50
46	Tires	15.25
23	Mountain Bike	350.45
76	Road Bike	530.00
10	Tandem	1200.00

Handwritten calculations:

$$\begin{array}{r} 530.00 \\ + 350.45 \\ + 1200.00 \\ \hline 1980.45 \end{array}$$

TABLE: ORDERS

Orderdon	Name	Partnum	Quantity	Remarks
15-MAY-1996	True Wheel	23	6	Paid
19-MAY-1996	True Wheel	76	3	Paid
2-SEP-1996	True Wheel	10	1	Paid
30-JUN-1996	True Wheel	42	8	Paid
30-JUN-1996	Bike Spec	54	10	Paid
30-MAY-1996	Bike Spec	10	2	Paid
30-MAY-1996	Bike Spet	23	8	Paid
17-JAN-1996	Bike Spec	76	11	Paid
17-JAN-1996	Le Shoppe	76	5	Paid
1-JUN-1996	Le Shoppe	10	3	Paid
1-JUN-1996	AAA Bike	10	1	Paid
1-JUL-1996	AAA Bike	76	4	Paid
1-JUL-1996	AAA Bike	46	14	Paid
11-JUL-1996	Jacks Bike	76	14	Paid

Handwritten notes:
 1. 2.8
 2.6
 Pa. 14
 6

- (i) Find out Cartesian product of orders and Parts i.e. Order * Parts.
- (ii) Determine the total order amount for part 'Road Bike'.
- (iii) Find out the details (Customer name, date, orderdon, total value) of those customers whose order value is more than the average order value.

OR

- (a) Write a query to display the grade of all employees based on the value of the column job as per following scheme:

JOB	GRADE
PRESIDENT	A
MANAGER	B
ANALYST	C
SALESMAN	D

- (b) Write a query to display employee name and Hiredate of employees who are employed after Employee 'BLAKE'.
- (c) List all the patients who were charged between Rs. 160 and Rs. 170 for item 2245.

Handwritten SQL query:
`SELECT Partnum, Price FROM PARTS WHERE Price > (SELECT`