I D NO.

PRESIDENCY UNIVERSITY, BENGALURU

SCHOOL OF ENGINEERING

Weightage: 40 % Max Marks: 80 Max Time: 02 hrs. 09 May Wednesday 2018

ENDTERM FINAL EXAMINATION MAY 2018

Even Semester 2017-18 Course: CSE 207 IV Sem.
Data base management system Computer Science

Instructions:

(i) Read the question properly and answer accordingly.
(ii) Question paper consists of 3 parts.

Part A

(4Q x 5 M = 20 Marks)

1. Explain different types of joins with syntax and example for each.
2. Consider the following schema and write the relational algebra expressions for the queries given below.

   Suppliers (sid: integer , sname: string, address: string, color: string)
   Parts (pid: integer, pname: string, color: string)
   Catalog(sid: integer, pid: integer, cost: real)

   i) "Find the names of suppliers who supply some red part."
   ii) "Find the IDs of suppliers who supply some red or green part."
   iii) "Find the IDs of suppliers who supply some red part or are at address- 221 Packer Ave"
   iv) Find the sids of suppliers who supply some red part and some green
   v) Find the sids of suppliers who supply every part.
3. Define views. Give the syntax and example to create view.
4. For the given set of functional dependencies on Relation R(ABCDEFGH) find number of candidates key {AB→C},{A→DE},{B→F},{F→GH}

Part B

(3 Q x 10 M = 30 Marks)

5. What is normalization? Explain fourth normal form with example
6. With example explain characterizing Schedules based on conflict serializable /Recoverability.
7. Explain properties of transaction with state transition diagram.

Part C

(2Q x 15 M = 30 Marks)

8. State the informal guidelines for relational schema design. Illustrate how violation of these guidelines may be harmful.
9. With appropriate examples explain 3NF & BCNF.

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Weightage: 20% Max Marks: 40 Max Time: 1 hr. 27 March Tuesday 2018

TEST – 2 SET B

Even Semester 2017-18 Course: **CSE 207 Data Base Management System** IV Sem. CSE

Instruction:

(i) Read the question properly and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and Non-programmable calculators are permitted

Part A

(1Q x 8M = 8 Marks)

1. Consider the following schema and write the relational calculus expressions for the queries given below.

   branch (*branch_name, branch_city, assets*)
   customer (*customer_name, customer_street, customer_city*)
   account (*account_number, branch_name, balance*)
   loan (*loan_number, branch_name, amount*)
   depositor (*customer_name, account_number*)
   borrower (*customer_name, loan_number*)

   i) Find the *loan_number, branch_name,* and *amount* for loans of over $1200
   ii) Find the loan number for each loan of an amount greater than $1200
   iii) Find the names of all customers having a loan, an account, or both at the bank
   iv) Find the names of all customers who have a loan and an account at the bank

OR

2. Briefly explain insertion deletion and update anomalies with examples?

Part B

(2Q x 8M = 16 Marks)

3. Briefly explain different types of join with examples.
4. Define functional dependency and briefly explain with examples.

Part C

(2Q x 8M = 16 Marks)

5. Explain the following with examples
   i) Super key
   ii) Candidate key
   iii) Prime attribute
6. Define and explain second normal form with example for each.

GAIN MORE KNOWLEDGE
REACH GREATER HEIGHTS

ID NO:	

PRESIDENCY UNIVERSITY, BENGALURU

SCHOOL OF ENGINEERING

Weightage: 20 % Max Marks: 40 Max Time: 1 hr. **22** Feb Thursday 2018

TEST – 1

Even Semester 2017-18 Course: **CSE 207 Data Base Management System** IV Sem. **CSE**

Instruction:

(i) Read the question properly and answer accordingly.

(ii) Question paper consists of 3 parts.

Part A (2 Q x 8 M = 16 Marks)

1. Explain the component module of DBMS and their interactions, with help of neat diagram. **08M**
2. Briefly explain with appropriate examples
   a. Primary Key
   b. Super Key
   c. Candidate Key **08M**

Part B **(**2 Q x 8 M = 16 Marks)

3. What are the main characteristics of database approach over file processing approach? **08M**
4. Explain three schema architecture. **08M**

Part C (1Q x 8 M = 8 Marks)

5. Write the ER diagram for an employee database. The constraints are as follows : **08M**
   a. An employee works for a department
   b. Every department is headed by manager
   c. An employee works on one or more projects
   d. An employee has dependents (d or e)
   OR
   e. A department controls the projects.

PTO

OR

6. Write SQL queries for the following database schema **08M**

STUDENT (USN, NAME, BRANCH, PERCENTAGE)
FACULTY (FID, FNAME, DEPARTMENT, DESIGNATION, SALARY)
COURSE (CID, CNAME, FID)
ENROLLED (CID, USN, GRADE)

a. Retrieve the names of all students enrolled for the course 'CS-54'
b. List all the departments having an average salary of faculty above Rs 10,000
c. List the names of the students enrolled for the course 'CS-51' and having 'B' grade
d. List the count of number of student's enrolled course wise.

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