 LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

**M.Sc.** DEGREE EXAMINATION - **COMPUTER SCIENCE**

SECOND SEMESTER – APRIL 2011

# CS 2814 - ADVANCED DATABASE MANAGEMENT SYSTEM

Date : 11-04-2011 Dept. No. Max. : 100 Marks

Time : 9:00 - 12:00

# Part - A

**Answer All the Questions: (10 x 2 = 20)**

1. What is Super Key?
2. List out the components of data block.
3. Mention the different types of bulk type-constructors.
4. What is meant by granting a privilege?
5. Define the term: Snowflake schema.
6. What do you meant by Residence Latency?
7. State the difference between Row-level and Statement-level active rules.
8. Define the term: Data Allocation.
9. What is Backward Chaining?
10. What do you meant by Shadow Paging?

# Part - B

## Answer all the Questions: (5 x 8 = 40)

1. a) Solve the query by using Relation Algebra

Employee(Eno,Ename,Bdate,Address,Gender,Salary,Superssn,Dno)

Department(Dname,Dnumber,MGRSSN,MGR-START-DATE)

Project(Pname,Pnumber,Plocation,Dnum)

For every project located in “Berlin”, list the project number, the controlling department

number and the department manager’s name, address and birthdate.

(Or)

b) Write a short note on Storage Organization in Oracle.

12 a) Explain in briefly about Deadlock Prevention.

(Or)

b) Explain the relationship between a type and its subtype in a type hierarchy with an example.

13 a) Explain in briefly about Mobile Computing Architecture with a neat diagram.

(Or)

b) Write a short note on the goals that Data Mining attempts to facilitate.

14 a) Give a detail note on I/O Parallelism.

(Or)

b) Write a database trigger before insert/update/delete for each statement not allowing any of

these operations on the table Employee on Mondays/Tuesdays & Wednesdays.

15 a) Explain the steps involved in converting a SQL query into Query tree with an example.

(Or)

b) Explain the types of privileges at the account level and at relation level.

**Part – C**

**Answer any two: (2 x 20 = 40)**

16 a) What is Query processing? Explain the steps involved for Query processing.(10)

b) What is a Transaction? Explain ACID properties with an example.(10)

17 a) What is a Data Warehouse? Describe the characteristics of a Data Ware house.(10)

b) Give a detail note on Data Fragmentation with an example.(10)

18. a) Explain in detail about Database Tuning in Relational Systems.(10)

b) Discuss the Entity Integrity & Referential Integrity constraints. Why each is considered

important?(10)

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