# LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

SECOND SEMESTER – **APRIL 2016**

**CS 2828 – ADVANCED DATA BASE SYSTEMS**

Date: 25-04-2016 Dept. No. Max. : 100 Marks

Time: 01:00-04:00

**Section – A (10 x 2 = 20 Marks)**

**Answer ALL Questions**

1. Differentiate file systems and database management system.
2. Give two DDL and two DML commands with syntax.
3. What is an integrity constraint?
4. What is binding of variable? Give an example.
5. What is the use of UNION? Given an example.
6. Define functional dependency.
7. What is WAIT/DIE?
8. List different types of locks.
9. Define: pipeline parallelism, partition parallelism.
10. What are the applications of Spatial Data?

**Section – B (5 x 8 = 40 Marks)**

**Answer ALL Questions**

11. a) How is data described and stored in a database management system.

OR

b) Give an E-R diagram for an employee of a department working in a project

i. **employee**: emp-no, emp-name, emp-dob, emp-address, emp-mobile
ii. **department**: dep-code, dep-name, dep-location
iii. **project**: proj-id, proj-name, proj-duration, proj-amount.

12. a) Describe integrity constraints over relations.

OR

b) Write notes on destroying, altering tables with examples.

13. a) Give a brief explanation on union, intersect and except.

OR

b) Explain the fourth normal form with an example.

14. a) Discuss about query optimization.

OR

b) Explain different locking schemes.

15. a) Discuss about distributed databases.

OR

b) Explain the applications of data mining.

## Section – C (2 x 20 = 40 Marks)

**Answer any TWO Questions**

16. a) Explain the structure of database management systems with a diagram.

    b) Discuss on relational algebra and relational calculus.

17. a) Explain third and Boyce Codd normal forms with an example.

    b) What is a deadlock? Explain deadlock avoidance methods.

18. a) Write an elaborate note on parallel databases.

    b) Explain Query Evaluation Process with an example.

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