

**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**



**M.C.A. DEGREE EXAMINATION – COMPUTER APPLICATIONS**

**FIRST SEMESTER – NOVEMBER 2018**

**CA 1808 – DATABASE MANAGEMENT SYSTEMS**

Date: 03-11-2018  
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

**PART – A**

**Answer ALL questions**

**10 X 2 = 20**

1. Define DBMS.
2. What is Data Manipulation Language?
3. What are composite attributes?
4. What are the advantages of normalizing tables?
5. How system interacts with database?
6. What is the cause for overflow buckets?
7. What is indexing?
8. Write the stages of query optimization.
9. Define ACID property.
10. What is shadow paging?

**PART – B**

**Answer ALL questions**

**5 X 8 = 40**

11. a) Write notes on the disadvantages in maintaining of records in file.  
Or  
b) Elucidate on various join operations of SQL.
12. a) Write note on basic notations of E-R diagram with example.  
Or  
b) Explain BCNF with example.
13. a) Discuss about fundamentals in building larger web applications.  
Or  
b) Elaborate on various levels of RAID.
14. a) Discuss B<sup>+</sup>-indexing of files with examples.  
Or  
b) Explain various selection operation algorithms.
15. a) Write note on lock-based protocols.  
Or  
b) Explain the methodologies of handling deadlock.

**PART – C**

**Answer any two questions**

**2 X 20 =40**

16. a) Explain various DML queries.

b) What is Multivalued dependency? Explain 4NF with example.

17. a) Discuss about the security measures of applications.

b) Explain various Equivalence rule.

18. a) Explain Timestamp based protocol in handling concurrent transactions.

b) Explain database architecture and system structure with necessary diagram

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