



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

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

**FIRST SEMESTER – APRIL 2017**

**16PCA1MC05- DATABASE MANAGEMENT SYSTEMS**

Date: 05-05-2017  
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

**PART – A**

**Answer ALL questions**

**10 X 2 = 20**

1. What is the need to develop database system?
2. List the parts of SQL.
3. Define entity set.
4. What is normal form of table?
5. Define Digital signature.
6. What are stored across data dictionary?
7. Give the types of ordered indices.
8. Write the steps of query processing.
9. What are the basic operations of transaction access?
10. What is lock table?

**PART – B**

**Answer ALL questions**

**5 X 8 = 40**

11. a) Write note on view of data.  
Or  
b) Describe various integrity constraints of relational schemas.
12. a) Elucidate on the representation of constraints on ER enterprise schema.  
Or  
b) Write short note on 3NF with example.
13. a) Describe the fundamentals of web.  
Or  
b) Illustrate about fixed and variable record organization of files
14. a) Write note on B+ tree indexing of files with example.  
Or  
b) Describe the evaluation of expressions.
15. a) Write note on the following transaction properties:  
(i) Serializability  
(ii) Recoverability.  
Or  
b) What is data buffering? Explain the methods of managing the same.

**PART – C**

**Answer any TWO questions**

**10X2=20**

16. a) Explain the mathematical representation of a table and its operations.

b) Discuss the following with example:

(i) Dynamic SQL

(ii) ODBC

17. a) Write note on decomposition using multivalued dependency.

b) Explicate on application data security.

18. a) Elaborate all the algorithms of selection operations.

b) Explain lock-based protocol of concurrent execution.