



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.C.A. DEGREE EXAMINATION – COMPUTER APPLICATIONS

FIRST SEMESTER – NOVEMBER 2017

17PCA1MC05 - DATABASE MANAGEMENT SYSTEMS

Date: 11-14-2017
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

PART – A

Answer ALL questions

10 X 2 = 20

1. Write the levels of data abstraction.
2. List the set operations of SQL.
3. What are entity sets?
4. Define 1NF.
5. What is digital signature?
6. List the techniques of buffer management.
7. How overflow buckets are attained?
8. Define optimization.
9. Write the states of transactions.
10. Write the fields of log-based recovery.

PART – B

Answer ALL questions

5 X 8 = 40

11. a) Write short note on database languages.
Or
b) What are views? Discuss on its definitions and operations.
12. a) Give the basic notations of ER diagram. Implement it on a banking domain.
Or
b) Describe BCNF with example.
13. a) Define Trigger. Discuss on its needs with example.
Or
b) Write note on organizing files and records.
14. a) Elucidate the bit-map indices with example.
Or
b) Describe the choices of evaluation plans.
15. a) Write note on serializability and recoverability of transactions.
Or
b) Write short note on deadlock handling.

PART – C

Answer any TWO questions

2 X 20 =40

16. a) Draw and explain the components of system structures.

b) Elaborate on the theory of functional dependency.

17. a) Explain the authorization techniques in SQL.

b) What is Hashing? Discuss its types for file indexing.

18. a) Explain the following with example:

(i) Time stamp-based protocol

(ii) Validation based protocol

b) What is table join? Describe its types with example.