



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.C.A. DEGREE EXAMINATION – COMPUTER APPLICATIONS

FIRST SEMESTER – NOVEMBER 2018

16/17/18PCA1MC05 – DATABASE MANAGEMENT SYSTEMS

Date: 03-11-2018

Dept. No.

Max. : 100 Marks

Time: 01:00-04:00

PART – A

Answer ALL questions

10 X 2 = 20

1. List few uses of database applications.
2. Define View. Give its syntax.
3. What are the pitfalls of database schema design?
4. Define 1NF.
5. Write the mode of interaction with Database system.
6. Define buffer manager. List virtual memory management schema.
7. List the techniques of evaluating search index.
8. Define query optimization.
9. Define transaction.
10. List the types of data failures.

PART – B

Answer ALL questions

5 X 8 = 40

11. a) Write the drawbacks of traditional file processing system.
Or
b) Discuss on Dynamic SQL access with example.
12. a) Define UML. Explain its parts with example.
Or
b) Write a note on 4NF with example.
13. a) Elucidate the fundamentals of web technologies for building DB system.
Or
b) Describe file organization technique with example.
14. a) Write about B⁺ tree indexing features and operations.
Or
b) State and explain all the selection operation algorithms.
15. a) Describe the serialization of concurrent execution with example.
Or
b) Explain the following:
(i) Multiple granularities
(ii) Multi-version Schema

PART – C

Answer any TWO questions

2 X 20 =40

16. a) Explain the following Fundamental Relational Algebraic operations with syntax:

- (i) Select (ii) Project (iii) Union.
(iv) Set- Difference (v) Natural - join

b) Construct an ER diagram for banking enterprise and explain its notations.

17. a) What is RAID? Discuss on its various Levels.

b) Explain various equivalence rules of query optimization.

18. a) Explain Deadlock handling in concurrent execution.

b) “Microsoft SQL server has incorporated effective RDMBS techni

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