



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc.DEGREE EXAMINATION – COMPUTER SCIENCE

SECOND SEMESTER – APRIL 2017

16PCS2MC05- ADVANCED DATABASE MANAGEMENT SYSTEMS

Date: 24-04-2017
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

Part A

Answer ALL questions

10 x 2 = 20

1. Define data models.
2. What is a flat file?
3. State the constraint for foreign key.
4. Write the syntax for unary operators.
5. What are the types of relations used in DBMS?
6. Define weak entity and give example.
7. What is transitive functional dependency?
8. Write the necessity of B-trees on indexing.
9. What is the work of query processor?
10. Write the desirable properties of transactions.

Part B

Answer ALL questions

5 x 8 = 40

- 11 a) Describe about the various Database languages.
(OR)
b) Write short notes on Relational database schemas.
- 12 a) Explain the binary relational operators with examples.
(OR)
b) Write the various types of Join operations with examples.
- 13 a) Explain the conceptual data modeling using entities and relationship with diagrams.
(OR)
b) Give brief notes on specialization and generalization in EER.
- 14 a) Explain the second normal form with an example.
(OR)
b) What are types of single level index? Explain them.

15 a) Write the steps involved in translating SQL queries into Relational algebra.

(OR)

b) Explain the heuristics query optimization techniques with an example.

Part C

Answer any TWO questions

2 x 20 = 40

16 a) Describe the Three Schema architecture with neat diagram.

b) Explain the various algebraic operations used in set theory.

17 a) Write the steps to constructs EER model to relations with example.

b) Describe the steps involved in multilevel indexes using B-trees.

18 a) Briefly explain the schedules based on recoverability.

b) Write various types relational model constraints used in relations.

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