

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



M.C.A. DEGREE EXAMINATION – COMPUTER APPLICATIONS

FIRST SEMESTER – APRIL 2022

18PCA1MC05 – DATABASE MANAGEMENT SYSTEMS

Date: 18-06-2022

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

PART – A

Q. No

Answer ALL Questions

(10 x 2 = 20 Marks)

- 1 List out any four database-system applications.
- 2 What is the use of Integrity Constraints?
- 3 State the term Entity.
- 4 What is Super key?
- 5 State the term Trigger.
- 6 What are the three possible ways of organizing records in files?
- 7 What are the two basic kinds of indices?
- 8 State the term Bitmap Indices.
- 9 List out the various states of transactions.
- 10 What are the two types of errors that may cause a transaction to fail?

PART – B

Answer ALL Questions

(5 x 8 = 40 Marks)

- 11 (a) Explain the purpose of database system in detail.
or
(b) State and explain the five built-in aggregate functions in detail.
- 12 (a) Explain the various types of Mapping Cardinalities in ER Model Constraints.
or
(b) State and explain the concept of first normal form (1NF) with an example.
- 13 (a) Explain the various fundamental technology of web with neat illustration.
or
(b) Describe the perception on common tertiary storage media in detail.
- 14 (a) Explain the concept of Static Hashing in detail with an example.
or
(b) Describe the concept of Sorting in Query processing with an example.
- 15 (a) State and explain the ACID properties of transaction concept in detail.
or
(b) Describe the concept of Timestamp based Protocols in detail.

PART – C

Answer any TWO Questions

(2 x 20 = 40 Marks)

- 16 Explain the following:
 - (a) SQL data types and schemas.
 - (b) Boyce-Codd Normal Form with an example
- 17 (a) Describe the concept of Physical Storage Media with neat illustration.
(b) State and explain the various levels of RAID with neat diagram.
- 18 (a) Explain the concept of B⁺ Tree Index files in detail with neat illustration.
(b) Describe the Perception on Deadlock Handing in detail with neat diagram.

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