



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – COMPUTER SCIENCE

FIRST SEMESTER – NOVEMBER 2022

PCS1MC03 – MODERN DATABASE MANAGEMENT

Date: 28-11-2022

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

SECTION A

Answer ALL the questions

1	Answer the following	(5 x 1 = 5)	
a)	Define Schema and Instance	K1	CO1
b)	Describe De-normalization	K1	CO1
c)	Define DML	K1	CO1
d)	Define data integration	K1	CO1
e)	Enumerate incremental Backup	K1	CO1
2	Fill in the blanks	(5 x 1 = 5)	
a)	The double ellipse denotes _____ in the ER diagram	K2	CO1
b)	The User defined integrity is achieved through _____ constraint	K2	CO1
c)	The procedures can be called using _____ keyword	K2	CO1
d)	_____ is a central, integrated data warehouse that is the control point and single “version of the truth”	K2	CO1
e)	_____ stores metadata, or information about the database, including attribute names and definitions for each table in the database	K2	CO1

SECTION B

Answer any THREE of the following in 500 words

(3 x 10 = 30)

3	Explain three schema architecture	K3	CO2
4	Articulate the significance of data types in a database language	K3	CO2
5	Explain DDL commands with examples	K3	CO2
6	Determine the three key business needs that requires integration with Big data and analytics	K3	CO2
7	Articulate the five core functions supported by the repository engine.	K3	CO2

SECTION C

Answer any TWO of the following in 500 words

(2 x 12.5 = 25)

8	Illustrate the components of the database environment	K4	CO3
9	Discriminate the Advantages and Disadvantages of Data Partitioning	K4	CO3
10	What are subqueries? How correlated subqueries differ from simple subqueries?	K4	CO3
11	Explain the characteristics of quality data	K4	CO3

SECTION D

Answer any ONE of the following in 1000 words

(1 x 15 = 15)

12	Discriminate 1NF, 2NF, 3NF and BCNF with example	K5	CO4
13	Asses the steps for tuning the database performance	K5	CO4

SECTION E

Answer any ONE of the following in 1000 words

(1 x 20 = 20)

14	Infer views? Mention the advantages of views. Write the criteria to develop the read-only views? Devise the possible database operations applicable to the views?	K6	CO5
15	Express the types of Data Warehouse Architectures	K6	CO5

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