

**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034****M.Sc. DEGREE EXAMINATION – COMPUTER SCIENCE****FIRST SEMESTER – APRIL 2023****PCS1MC03 – MODERN DATABASE MANAGEMENT**

Date: 03-05-2023

Dept. No. 

Max. : 100 Marks

Time: 09:00 AM - 12:00 NOON

**SECTION A****Answer ALL the questions**

<b>1</b>	<b>Answer the following</b>	<b>(5 x 1 = 5)</b>	
a)	Define Weak entity	K1	CO1
b)	Define Partial Functional Dependency	K1	CO1
c)	Describe DDL	K1	CO1
d)	Define data transformation	K1	CO1
e)	Describe the roles of data administrators	K1	CO1
<b>2</b>	<b>Fill in the blanks</b>	<b>(5 x 1 = 5)</b>	
a)	How the data are stored and where they are stored are dealt with _____ schema.	K2	CO1
b)	The physical storage of the database files are called as _____ files.	K2	CO1
c)	_____ option is used to validate the view with the given criteria for insert or update.	K2	CO1
d)	_____ is a set of processes and procedures aimed at managing the data within an organization with availability, integrity, and compliance with regulations.	K2	CO1
e)	_____ are simple data element documentation tools, information repositories are used to manage the total information processing environment.	K2	CO1

**SECTION B**

	<b>Answer any THREE of the following in 500 words</b>	<b>(3 x 10 = 30)</b>	
3	Sketch the range of people involved in database development.	K3	CO2
4	Write the methods for handling the missing data.	K3	CO2
5	Discover the types of triggers. Construct a trigger to copy the details in a new table when rows are getting deleted in one table.	K3	CO2
6	Explain Third Normal Form and Boyce Codd Normal Form with example.	K3	CO2
7	Determine the functions for data transformation operations.	K3	CO2

**SECTION C**

	<b>Answer any TWO of the following in 500 words</b>	<b>(2 x 12.5 = 25)</b>	
8	Explain the database development process.	K4	CO3
9	Devise the strategies for developing best queries.	K4	CO3

10	Differentiate Dynamic SQL with Embedded SQL with example.	K4	CO3
11	Explain the methods of database backup.	K4	CO3

#### SECTION D

**Answer any ONE of the following in 1000 words**

**(1 x 15 = 15)**

12	Summarize the usage of integrity constraints and its types with example.	K5	CO4
13	Distinguish simple Sub queries with correlated sub queries with example. Justify the application of sub queries in the usage of aggregate functions.	K5	CO4

#### SECTION E

**Answer any ONE of the following in 1000 words**

**(1 x 20 = 20)**

14	i) Write the components and cardinalities maintained in ER diagrams. (8)	K6	CO5
	ii) Draw ER diagram for the following shopping application Customer( CustomerID, name, ContactNo, mobileNo) Bill( BillNo, CustID, BillDate, total Amount) Product (ProductID, Pname, ExpDate, Msr_Qty, UnitPrice) Purchase(ProdID, Billno, QTY_Purchased) Payment( PaymentID, date_payment, Payment_mode, status) Feedback( <u>custId</u> , <u>Bill_no</u> , <u>ProductID</u> , feedback_text) (12)		
15	Report the need of controlling the concurrent access of data? Write the types and levels of locking. Infer deadlock management with different criteria.	K6	CO5

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