Roll No. : ……

Bharati Vidyapeeth's

Institute of Computer Applications and Management (BVICAM)

A-4, Paschim Vihar, New Delhi-63

FIRST SEMESTER [MCA] Internal Examination, November 2023

Paper Code: MCA-107	**Subject: Database Management System**

Time: 3 Hours **Maximum Marks: 45**

Note: Attempt THREE questions in all. Question No. 1 is compulsory, and attempt one question from each unit.

1. Answer all the following questions briefly: - 1.5 × 10 = 15

   (a) Explain characteristics of the database CO1

   (b) Differentiate between Generalization and Specialization. CO1

   (c) Illustrate all the notations of the ER diagram. CO1

   (d) Construct a relational database of blood donation camp. CO1

   (e) Classify Schemas and Instances. CO1

   (f) Explain referential integrity constraint. CO2

   (g) Explain domain constraint with example. CO2

   (h) Distinguish Primary key and Unique constraint. CO1

   (i) Compare the use of HAVING and WHERE clause. CO2

   (j) Illustrate characteristics of relational database. CO2

UNIT – I

2. (a) Construct a relational database of library management system. 5 CO1

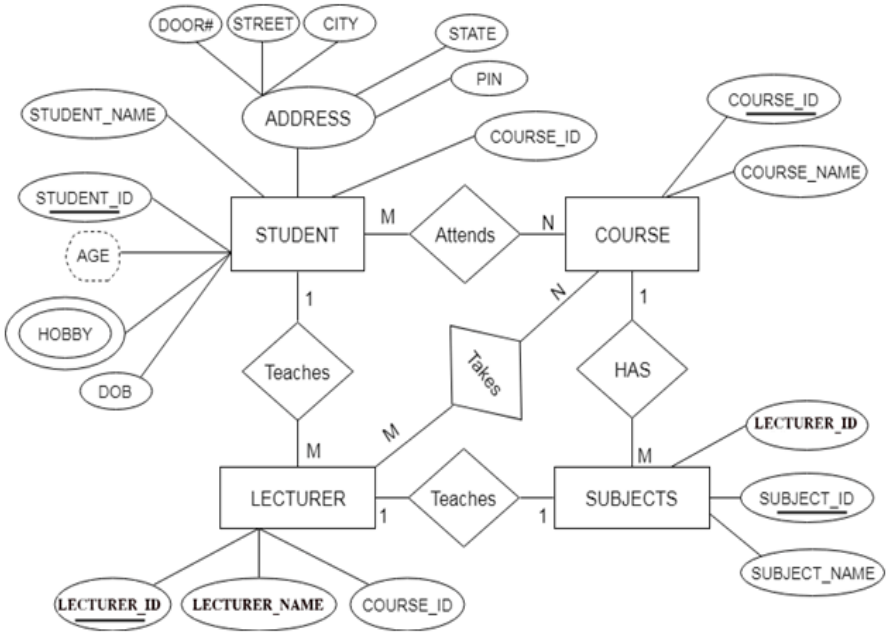
   (b) Determine different database users? Explain three roles of database administrator. 5 CO1

   (c) Explain weak entities? And with example show how they are converted into strong entities? 5 CO1

3. (a) Draw in ER diagram of Hospital Management system. Explain in detail. 5 CO1

   (b) Explain the difference between traditional and relational databases. 5 CO1

   (c) Convert following ER diagram to relational table 5 CO1



Unit - II

4.	(a)	Compare and contrast Relational Algebra with SQL. Further, discuss various relational algebra operators with examples.	7.5	CO2
	(b)	Explain various set operations with the help of an example.	7.5	CO2
5.	(a)	Illustrate with examples about DML, DDL, DCL and TCL.	7.5	CO2
	(b)	Explain the concept of relational model constraints and domain constraints.	7.5	CO2