DCCA203

Reg. No.				

II Semester B.C.A. (NEP) Degree Examination, October - 2022 COMPUTER SCIENCE

Database Management System

Time: 2½ Hours

Maximum Marks: 60

Instructions to Candidates:

Answer any four questions from each section.



Answer any 4 questions. Each question carries 2 marks.

 $(4\times2=8)$

- 1. Define Database and Database Management system.
- 2. What is data model? Name three categories of data model.
- 3. What is key attribute? Give an example.
- 4. List data types allowed in SQL.
- 5. What is transaction control language? List any two transaction control commands.
- **6.** What is concurrency control?

SECTION-B

Answer any 4 questions. Each question carries 5 marks.

 $(4 \times 5 = 20)$

- 7. Explain the main characteristics of Database approach.
- 8. What is data independence? Explain briefly about the types of data independence.
- 9. What is an ER diagram? Explain different notations used in drawing ER diagram.
- 10. Create an employee table using the following fields.

Field name

Data type

EMPNO

NUMBER

ENAME

CHAR

DOB

Date

[P.T.O.

Dept

String

Salary

Real

- a) Create the Table.
- b) Insert 5 tuples.
- c) Find the sum of salaries.
- d) Find department wise count of Employees.
- e) Display the tuples in the order of average salaries of Employees.
- 11. What is a transaction? Explain ACID properties of a transaction.
- 12. Write a short note on database backup and database recovery.

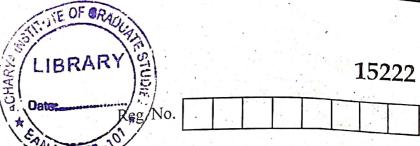
SECTION-C

Answer any 4 questions. Each question carries 8 marks.

 $(4 \times 8 = 32)$

- 13. Explain three schema architecture with a neat diagram.
- 14. Discuss the different types of indexes.
- 15. Draw an ER diagram for Bank Database with 5 entities and 5 attributes for each entity. Specify the cardinality ratio on each of the relationships existing between entitties.
- 16. Explain different relational algebra operations.
- 17. What is Normalization? Differentiate between 3NF and BCNF.
- 18. Explain different states of a transaction with a neat diagram.





II Semester B.C.A. Degree Examination, September/October - 2022

COMPUTER SCIENCE DATABASE MANAGEMENT SYSTEM

Paper: BCA 204 T (CBCS Scheme)

Time: 3 Hours

Maximum Marks: 70

Instructions to Candidates:

Answer all sections.

SECTION-A

Answer any TEN questions. Each question carries two marks.

 $(10 \times 2 = 20)$

- 1. What is DBMS?
- 2. Define data impendence.
- 3. What is an entity?
- 4. Define RAID.
- 5. Define primary key.
- 6. Define hashing.
- 7. What is DML?
- 8. What is relational algebra?
- 9. List any two advantages of PL/SQL.
- 10. List the data types allowed in SQL.
- 11. Define cursor.
- 12. What is a transaction?

[P.T.O.

(2) SECTION-B

* .	An	swer any FIVE questions. Each question carries 10 marks. (5×10	=50)
13.	a) .	Explain different people behind DBMS.	(5)
	b)	Write the advantages of DBMS.	(5)
14.	a)	Explain the architecture of DBMS.	_. (5)
:	b)	Explain different types of relationships used in DBMS.	(5)
15.	a)	Discuss any five differences between distributed DBMS and centralized DBMS	. (5)
	b) ·	Draw an ER diagram for Student Database system.	(5)
16.	a)	Explain normalization and its types.	(5)
	b)	Explain selection and projection operation in relational algebra with example.	(5)
17.	a)	Write a note on operations on files.	(5)
•	b)	Explain any one Secondary storage device.	(5)
18.	a)	Define the terms tuple, domain and attribute with suitable example.	(5)
	b)	Explain set operations in SQL.	(5)
19.	a)	The student detail database has a table with following attributes.	
		STUDENT (regno: int, name: String, dob: date, marks: int)	
		i) Create the above table.	
		ii) Remove the existing attribute marks from the table.	
		iii) Change the datatype of regno from integer to string.	
	, i	iv) Add a new attribute phone - no to the existing table.	
		v) Enter one tuple into the table.	(5)
	b)	Explain while loop in PL/SQL with an example.	(5)
20.	a)	Define time stamp. Explain any two methods.	(5)
	b)	Evnlain different types of I - 1	(5)