R18 Regulation *Subject code: 2O6DB*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VI Semester Supplementary Examinations, July 2024

Database Management Systems

(ECE)

Maximum Marks: 70 Date:30.07.2024 Duration: 3 hours

Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

	Part-A	
All the following questions carry equal marks		(10X2M=20 Marks)
1	List the Database Applications.	
2	Define Instances and schemas of database.	
3	Define CROSS PRODUCT operation in Relational algebra.	
4	Discuss the basic form of SQL query.	
5	Define First Normal Form.	
6	Define Armstrong axioms for FD's.	
7	Define a checkpoint.	
8	Write about ACID properties.	
9	Define B+ tree index file.	
10	Discuss about data on External storage.	
	Part-B	
Answer All the following questions.		(10MX 5=50Marks)
11	Explain about Database Architecture. [10]	
	OR	
12	Explain about Logical database design. [10]	
13	A. Discuss correlated nested queries. [5] B. Write and explain a query to find the names of sailors who have reserved a red boat? [5]	
	OR	
14	Explain about Aggregate operators in sql with examples. [10]	
15	What is normalization? Explain the conditions are required for a relation to be in 2NF, 3NF and BCNF explain with examples. [10]	
	OR	
16	Determine the closer of the following set of functional dependencies for a relation scheme R(A,B,C,D,E,F,G,H), F={ AB→C, BD→EF, AD→G, A→H} List the candidate keys of R. [10]	
17	Explain in detail about the two-phase locking protocol. [10]	
	OR	
18	Explain about Remote Backup Systems. [10]	
19	What are the indexed data structures? Explain in detail. [10]	
	OR	
20	Explain insertion and search operation in B+ trees. [10]	