KNS INSTITUTE OF TECHNOLOGY

DEPARTMENT OF CSE/ISE

Question Bank for 2nd IA Test

Academic Year (2021 – 2022)

Semester	5th 'A' & 'B'	Subject Code	18CS53	Subject Name	Database Management Systems
Faculty	Mr. Md Ziaulla				
Date	15- 12- 2021				

COURSE OUTCOMES:

CO2: Understand the basics of applying integrity constraints on a database using RDBMS and relational algebra.

CO3: Apply normalization and functional dependency for the purpose of query processing and query optimization.

Sl NO	SYLLABUS QUESTION	CO	PO
1	Explain aggregate functions in SQL with example.	CO2	PO1
2	Explain IN and EXISTS operations with example.	CO3	PO1, PO2
3	Discuss various types of JOIN operations in SQL with example.	CO2	PO1, PO2
4	Explain the informal Design guidelines for relation schemas.	CO3	PO1
5	With a neat diagram explain 3- tier architecture. What are the advantages of 3- tier architecture.	CO2, CO3	PO1
6	a) Explain Schema change statements in SQL. b) Explain DROP, DELETE and UPDATE statements in SQL.	CO3	PO1, PO2
7	List and explain various unary and binary operations of relational algebra.	CO3	PO1, PO2, PO3
8	Consider the Company database: Works_on(Essn, Pno, Hours) Employee (Fname, Lname, SSN, salary, Dno, Address) Department (Dnumber, Dname, Mgr_SSN) , Dependent (Dep_name, ESSn) 1) Retrieve the names of employees who have no dependents. 2) Retrieve all employees who's salary is in between 10,000 to 20,000 rupees. 3) Retrieve the salary of all employees with distinct values.	CO3	PO1, PO2
9	How is view created and dropped? What problems associated with updating the view's?	CO3	PO1, PO2
10	Explain the following with syntax and example. Embedded SQL 2) Database stored procedure	CO3	PO1
11	Discuss the significance of Assertions and Triggers with suitable example.	CO2, CO3	PO1

12	Write relational algebra queries for the following 1. Retrieve the names and salaries of employees who work in department 4. 2. Retrieve each EMPLOYEE's name and the name of the EPARTMENT he/ she works for 3. Retrieve each EMPLOYEE's name and the name of his/ her immediate SUPERVISOR. 4. For each department, retrieve the department number, the number of employees, and the average salary (in the department): 5. Retrieve the average salary of all employees.	CO3	PO1, PO2
13	Explain insertion deletion and modification anomalies with an example.	CO2, CO3	PO1, PO2
14	a) What is Impedance Mismatch problem? Which of the three programming approaches minimizes this problem b) List the approaches to DB Programming. Main issues involved in DB Programming?	CO3	PO1
15	Explain how groupBy clause works? What is the difference between WHERE and Having? Write an SQL query for each project on which more than two employees work , retrieve the project number, project name, and the number of employees who work on that project.	CO2, CO3	PO1
16	Differentiate i) Dynamic SQLv/ s Embedded SQL ii. SQLJv/ s JDBC	CO3	PO1, PO2
17	Write a note on stored procedures along with the syntax. Discuss the advantages of stored procedures	CO3	PO1, PO2
18	Consider the following schema Sailors(Sid, Sname, Rating, Age) Boats(Bid, Bname, Bcolor) Reserves(Sid, Bid, day) List the names of sailors who reserve red boat. List the names of sailors who reserve either green or red boat. List the names of the sailors who have reserved the boat by name 'Sagar' List the names of boats reserved by the sailor 'Arvind'	CO2, CO3	PO1, PO2

Signature of faculty