CLASS: BE   SEMESTER : IV
BRANCH: IT   SESSION : SP/19

SUBJECT: IT4021 DATABASE SYSTEM CONCEPT

TIME: 3:00 HOURS   FULL MARKS: 60

INSTRUCTIONS:
1. The question paper contains 7 questions each of 12 marks and total 84 marks.
2. Candidates may attempt any 5 questions maximum of 60 marks.
3. The missing data, if any, may be assumed suitably.
***4.* Before attempting the question paper, be sure that you have got the correct question paper.**
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

Q.1(a)	How does file processing system cause data redundancy and data inconsistency?	[2]
Q.1(b)	What is DML and what are its types. Explain.	[4]
Q.1(c)	Who are sophisticated users? Explain.	[6]
Q.2(a)	What is a derived attribute?	[2]
Q.2(b)	What do double ellipses represent? Explain it with example.	[4]
Q.2(c)	What is aggregation? Explain with example.	[6]
Q.3(a)	What is schema diagram?	[2]
Q.3(b)	Explain natural join.	[4]
Q.3(c)	Explain Cartesian product with an example.	[6]
Q.4(a)	Create a table loan (loan number, branch name, amount).	[2]
Q.4(b)	Write an sql statement to display all branchnames from loan relation with repetition. Write another sql statement to display all branchnames from loan relation without repetition.	[4]
Q.4(c)	In the SQL statement "Select loannumber from loan where amount between 90000 and 100000", are 90000 and 100000 inclusive?	[6]
Q.5(a)	What is first normal form? Explain with example.	[2]
Q.5(b)	What is augmentation rule in functional armstrong's axioms.	[4]
Q.5(c)	Explain BCNF in your own words.	[6]
Q.6(a)	What are secondary indices?	[2]
Q.6(b)	What are the advantages of dense indices and sparse indices?	[4]
Q.6(c)	Explain multilevel indices with B+tree structure.	[6]
Q.7(a)	Explain a transaction with an example.	[2]
Q.7(b)	Explain ACID property.	[4]
Q.7(c)	What are deadlocks? Explain.	[6]