Programme:MCA   Year: I   Semester: I

Academic Year: 2015-2016

Subject : Database Management Systems

Marks: 70
Time : 2.00 pm to 5.00 pm
Durations: 3 (hrs)

Date : 14 June 2016

Re -Examination
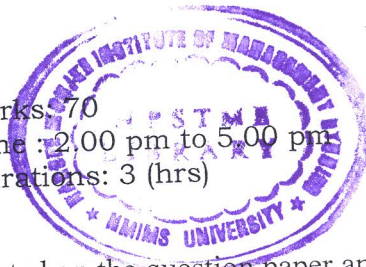
Instructions: Candidate should read carefully the instructions printed on the question paper and on the cover of the Answer Book, which is provided for their use.

N.B.:
- (1) Question No.1 is **compulsory**.
- (2) Out of remaining six questions attempt any **four** questions.
- (3) Assumptions made should be **clearly** stated.
- (4) All questions carry equal marks.
- (5) Answer to each new question to be started on **fresh page**.
- (6) Figures on the right hand side indicate **full marks**

Q.1	A	What is the difference between unique constraint and primary key constraint?	2
	B	What is the difference between truncate and delete commands in SQL?	2
	C	What is the difference between 3NF and BCNF?	2
	D	Why are triggers required?	2
	E	What are recoverable schedules?	2
	F	When are two transactions set to conflict each other?	2
	G	Explain Wait and Die protocol?	7
Q.2	A	Describe the overall architecture of DBMS with a suitable diagram	7
	B	What are the steps in mapping ER diagrams to tables?	7
Q.3	A	When a transaction is roll backed under timestamp ordering, it is assigned a new time stamp? Why can't the transaction retain the old timestamp	7
	B	Explain different types of join operators in relational algebra with example	7
Q.4	A	Briefly discuss the Two Phase Locking protocol used in concurrency control	7
	B	Given the schema :	

Student (PID, NAME, BRANCH, PERCENTAGE)
Faculty (FID, FNAME, DEPT, DESIGNATION, SALARY)
Course (CID, CNAME, FID)
Enroll (CID, PID, GRADE)

Give the relation algebra expression for the following :

i)	Retrieve the name and percentage of all students.	2
ii)	List the students who have enrolled for computer science course	2
iii)	List the Departments and their average salaries	3

Q.5	A	Briefly explain 1NF, 2NF, 3NF with example	7
	B	What is security and authorization in sql?	7
Q.6	A	What are the problems encountered in concurrent transactions?	7

B   Explain Shadow Paging.   7

Q.7   A   What is RAID Technology? How reliability is improved using RAID?   7

     B   Write short notes on B+ Trees.   7

ૐ ————————————————————— ૠ

2/2