Hall Ticket No: ⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚   Question Paper Code: 16MCA294-M1

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE
(UGC-AUTONOMOUS)
MCA(2Yrs) II Year I Semester (R16) Supplementary End Semester Examinations – Jan 2019
(Regulations: R16)
FUNDAMENTALS OF DATABASE SYSTEMS (MOOC)

Time: 3Hrs   Max Marks: 50

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.no 1 to 5 answer either Part A or Part B only

Q.1(A)	Write the ER diagram for University.	10M
	OR	
Q.1(B)	Explain the overall system architecture of DBMS.	10M
Q.2(A)	Explain the fundamental operations of Relational Algebra with an example.	10M
	OR	
Q.2(B)	Explain the various types of Integrity constraints.	10M
Q.3(A)	Explain the following with an example. (a) Lossy decomposition (b) Non loss decomposition	(5M+5M)
	OR	
Q.3(B)	(a)What is Join dependency? (b) Explain 5NF with example.	(3M+7M)
Q.4(A)	Explain about Lock based concurrency control mechanism.	10M
	OR	
Q.4(B)	Explain about data base recovery management.	10M
Q.5(A)	Write notes on query optimization techniques.	10M
	OR	
Q.5(B)	Explain about B-Tree and B+ Tree.	10M

*** END***