SE SEM-III CBGS IT SECOND HALF 2016.

SUB:- DBMS DATE:- 22/12/2016.

Q. P. Code : 552502

(Time: 3 Hrs) **Marks: 80**

N.B. : 1. Question no. 1 is **compulsory.**
2. Solve any **Three** questions out of remaining **Five** questions.

Qu-1	a)	Explain generalization and specialization.	5
	b)	Describe ACID Properties.	5
	c)	Explain Total participation and Partial participation with example.	5
	d)	Explain aggregate functions with example.	5
Qu-2	a)	Explain Shadow Paging.	10
	b)	Explain different integrity constraints.	10
Qu-3	a)	Draw an E-R diagram for University database consisting of four entities: Student, Department, Class, Faculty. Student has unique id, student can enroll for multiple classes and has at most one major. Faculty must belong to department and faculty can teach multiple classes. Each class is taught by only one faculty. Every student will get grade for the class he/she enrolled.	10
	b)	Explain conflict and View Serializability with example.	10
Qu-4	a)	Describe BCNF and 4NF in detail.	10
	b)	Explain any 2 concurrency protocols in database systems.	10
Qu-5	a)	Explain any four relational algebra operators with example.	10
	b)	Explain cost based query optimization.	10
Qu-6	a)	Explain deadlock with wait-for-graph.	10
	b)	What is system catalog and meta data?	10