13. a) Consider the following database : **5**

Employee (ename, street, city)

Works (ename, company_name, salary)

Company (company_name, city)

Manages (ename, mgr_name)

Write SQL queries for the following :

a) Find all the employee names who are working in 'XYZ' company and working under the manager named 'Rama Rao'.

b) Find the number of employees working in any company located in 'Hyderabad'.

b) Explain 2NF, 3NF with an example. **5**

14. a) What are ACID properties and explain them ? **4**

b) Explain the concept of 'view serializability' with an example. **6**

15. a) Construct B^+ tree for the following set of values. **6**

6 17 28 22 43

54 65 76 87 98 99

b) Discuss about immediate database modification. **4**

16. a) Explain log based recovery mechanism. **5**

b) Explain the concept of 2-phase locking. **5**

17. Write short notes on :

a) Deadlock prevention. **3**

b) Cascading rollback. **3**

c) Storage structure. **4**

Code No. : **6107/S**

FACULTY OF ENGINEERING
B.E. 3/4 (CSE) I Semester (Supple.) Examination, July 2014
DATABASE MANAGEMENT SYSTEMS

Time: 3 Hours] [Max. Marks: 75

Note : *Answer **all** questions from Part – **A** and **any five** questions from Part – **B**.*

PART – A

1. What are the advantages of views ? **2**
2. State any 5 responsibilities of DBA. **3**
3. What is a candidate key ? **2**
4. What are different uses of null values in a database ? **3**
5. What is a cursor ? **2**
6. Define normalization. **2**
7. What are Bitmap Indices ? **3**
8. Draw the transaction, state diagram. **3**
9. What are the disadvantages of lock based concurrency control/protocols ? **2**
10. What are the different recovery algorithms ? **3**

PART – B

11. a) What are the differences between file processing system and database systems ? **6**
    b) Explain the concept of generalization and specialization. **4**
12. a) Explain the process of converting ER diagram to tables. **4**
    b) What are the different relational algebra operations ? Explain them with an example. **6**