VIT UNIVERSITY
(Estd. u/s 3 of UGC Act 1956)

Inter Session Examination - December 2013

Course : ITE302 - Database Systems **Slot : A1+A2**

Class NBR : 1016

Time : Three Hours **Max.Marks:100**

PART – A (8 X 5 = 40 Marks)
Answer ALL Questions

1. Write about various database users.
2. What is nested query in SQL? Explain with suitable example.
3. Give an example of a relation schema which is in 2NF but not in 3NF using primary key concept.
4. Discuss the need of generalization and specialization in ER model.
5. Explain the concept of shadow paging. Why it is necessary?
6. Draw the state diagram and discuss the typical states that a transaction goes through during execution.
7. Discuss about log purpose during recovery.
8. Write any five E.F Codd rule used in design of data model.

PART – B (6 X 10 = 60 Marks)
Answer any SIX Questions

9. a) Explain the difference between file system and DBMS. **[5]**
   b) List out the applications of database. **[5]**
10. Choose any one database on your own interest and draw the ER diagram for it.
11. Explain the first three normal forms with suitable examples.
12. a) What is relational algebra? **[2]**
    b) Explain the various steps involved in query processing with example. **[8]**
13. a) Discuss the time stamp ordering protocol for concurrency control. **[5]**
    b) How strict time stamp ordering does differs from basic time stamp ordering. **[5]**

14. a) Define deadlock. **[2]**

b) Brief about various deadlock recovery techniques. **[8]**

15. Write short notes to the following with example:

a) cold restart **[2]**

b) transitiveness **[2]**

c) checkpoint **[2]**

d) superkey **[2]**

e) NULL attribute. **[2]**

16. a) What is View in SQL? Explain with example. **[5]**

b) Write about recovery algorithms. **[5]**

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