Sem III / Rev / I.T. / GUI & Data Base management / Dec.09

Con. 5520–09. **(REVISED COURSE)** **SP–7439**

(3 Hours) **[Total Marks : 100**

Notes:

1) Question **number 1** is compulsory
2) Solve **any 4** questions from question number 2 to 7.
3) Assume **appropriate data** where necessary.
4) All questions carry **equal marks.**

Q1) a) Explain Database architecture in detail. 12

b) Explain Murphy's low of GUI Design and standard of GUI. 08

Q2) a) Consider the following database, give an expression in SQL, 12

Employee (employee-name, street, city ,date of join)
Works (employee-name, company-name, salary)
Company (company-name, city)
Manages (employee-name, manager-name),

1] Find all employees in database who live in the same cities and on the same Street as do their manager.

2] Find all employees who earn more than average salary of all employee of their company

3] Give all employee of XYZ a 10% rise.

4] Find all employees who join in the month of March

5] Delete the Smith belonging to XYZ Company.

b) Explain following relational algebra operator in detail, 08

i) select , ii) project , iii) Cartesian product , iv) rename

Q3) a) Explain time stamp ordering protocol and Thomas write rule in detail. 10

b) Explain shadow page recovery mechanism in DBMS. 10

Q4) a) what is dead Lock? How it is detected? Discuses different types of deadlock avoidance scheme. 10

b) Draw the ER diagram for the university database, and convert it into relational database. 10

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Q5) a) Answer the following, 10

- give use of msgbox ,input box with example
- State and explain use of OLE
- Significance of option Explicit
- Difference between List Box and Combo box
- Use of MDI form

b) Explain ACID Properties of transaction and state diagram. 10

Q6) a) what is DBA? Explain it's function in detail. 10

b) Define serializability? Explain conflict and view serializability 10

Q7) Write notes on any four, 20

1) Validation based protocol
2) Checkpoint recovery mechanism
3) Weak entity set and strong entity set
4) Mapping constraints
5) Total participation, partial participation, unique key, primary key, and partial key.
