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(28)

B.E / B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, NOV / DEC 2012

GEOINFORMATICS ENGINEERING BRANCH

THIRD SEMESTER

GI 9204 DATABASE SYSTEMS

(REGULATIONS: 2008)

Time : 3 Hours

Answer ALL Questions

Max. Marks 100

Draw neat sketches wherever necessary

PART-A (10 x 2 = 20 Marks)

1. How the information is different from data? Give example
2. What is a database management system (DBMS)?
3. What are the categories of Database constraints?
4. Define schema and instance with example.
5. How the string comparison is performed in SQL? Give example
6. List the aggregate functions in SQL. Give any one example
7. List the reasons for variable length records.
8. Define functional dependency.
9. List two properties and two events of button object
10. What is the role of CLR in .Net environment?

Part – B (5 x 16 = 80 marks)

11. (i) Explain Information system life cycle and database application system life cycle 16
12. a) (i) How do you suggest the hardware and software requirement for a DBMS? Write about the factors and needs. 10
(ii) Explain about the roles of the administrators and designers of DBMS 6

OR

- b) (i) How do you classify DBMS based on various factors and applications 10
- (ii) What is the need for normalization in data base design? Give details on 3rd Normal form with an example schema. 6

13. a) (i) Supplier (sid: integer, sname: string, address: string) 12
Parts (pid: integer, pname: string, color: string)
Catalog(sid: integer, pid: integer, cost: real)

Consider the above schema, the key fields are underlined and domain is given after each field. Write the following queries both in **relational algebra and SQL**

- Find the cost of the red part supplied by "A2Z Traders"
- Find the sids of suppliers who supply some red or green part
- Find the sids of suppliers who supply some red and green part

- (ii) Explain the embedded SQL 4

OR

- b) (i) Explain Codd's rules in relational data model 12
- (ii) Explain the fundamental operations of relational algebra with example. 4
14. a) (i) Explain the statistical database security problem and how we can rectify? 6
- (ii) How SET operations can be achieved in SQL? Give Examples 6
- (iii) Explain ADO.Net Dataset component 4

OR

- b) (i) Explain the various phases of database design process. 10
- (ii) How the triggers are helpful in database? Give example 6
15. a) (i) Explain ADO.Net object model 12
- (ii) Compare ADO.Net with ADO 4

OR

- b) (i) Explain about Dot Net Frame work and its working process 12
- (ii) Write about XML and how it can be used with ADO.Net? 4