PGDCA 2ND SEMESTER EXAMINATION 2013

PAPER : VIII

(DATA BASED MANAGEMENT SYSTEM)

Time : 2 Hrs. Full Marks : 50

1. Answer any five from the following : 2×5 = 10

   (a) Define 'Field' and 'Record'.

   (b) What do you mean by 'data integrity'?

   (c) Define the term 'entity and attribute. Also give example.

   (d) Define the term 'domain' with example.

   (e) What is 'primary key' and 'candidate key'?

   (f) What are DDL and DML?

   (g) What is database security?

2. Answer any three from the following 4×3 = 12

   (a) List out the advantages and disadvantages of sequential access organization.

   (b) Explain about the benefits of database approach over the traditional file processing system.

(c) Differentiate between:

(i) Single valued attribute and multiple valued attribute

(ii) Strong entity and weak entity.

(d) What are the advatages of 'relationl model'?

(e) Define functional dependency? Why is it required?

3. Answer any three from the following $6 \times 3 = 18$

(a) Explain the three level database architecture. What are its objectives?

(b) Describe conceptual, logical and physical data model.

(c) State and explain the basic components of a 'Relation'.

(d) Differentiated between : Prime attribute and non prime attribute with examples.

(e) What do you mean by normalization? How we convert a database in 2NF to NF?

4. Answer any one question from the following $10 \times 1 = 10$

(a) Consider the following relation with Primary key underlined.

Sales person (SNo , Sname, Designation)

Area (ANo, Aname, Manager No)

Product (Pno, pname, cost)

SAP (SNo, Ano, Pno)

(i) Define the schema in SQL Specify the attributes and keys assuming that 'ManagerNo' is a foreign key.

(ii) Answer using SQL

-Get the names of all products that are sold

-Get the names of all sales persons who are not managers.

(b) Construct an ER diagram for a hospital with a set of patients and a set of medical doctors. Associate with each patient a log of various tests and examination conducted.

(c) Write short notes on the following :

(i) Merits and demerits of DBMS

(ii) Database administrator

(iii) E-R model

(iv) Codd's rules for RDBMS

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