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SB-1425

First Year B. C. A. (Sem. II) Examination

March / April – 2011

Paper - 205 : Database Management System

Time : **3** Hours] [Total Marks : **70**

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ **F. Y. B.C.A. (Sem. 2)**

Name of the Subject :

☛ **Paper - 205 : Database Management System**

☛ Subject Code No. : **1 4 2 5** ☛ Section No. (1, 2,.....) : **Nil**

Seat No. :

Student's Signature

(2) Figure on the right indicate marks.

(3) Take assumption whenever necessary.

1 Answer Following: (any seven) **14**

(1) Differentiate between logical and physical independence ?

(2) What is usage of foreign key ? Explain with example.

(3) What do you mean by total participation in a relationship ?

(4) What is difference between IN and = operator.

(5) List the requirements of DBMS.

(6) List out any two DDL statements and any two TCL statements.

(7) What is data manager ? List responsibilities of database manager.

(8) Differentiate between trivial and non-trivial dependency.

2 Answer the following : (any three) **18**

(a) Explain Referential integrity constraints. Explain unique key constraints. Is Unique + NotNull is same as primary key or not. Justify.

(b) Draw an E-R diagram on Departmental Store Management System.

(c) Discuss the concept of Decomposition. Explain the characteristics of decomposition.

(d) What is the purpose of Normalization ? Write a note on Third normal form.

3 Answer the following : (any two) **14**

(a) Consider the following relation :
Teachers(course, professor, room, roomCap, enroll_limit)
FD={course->room, professor, roomCap, enroll_limit,
Room->roomCap,
Room->enroll_limit}
Normalize it up to 3rd normal form.

(b) Explain the components of DBMS.

(c) Write a note on anomalies in database during insertion, deletion, updation.

4 Answer the following : (any two) **14**

(a) Differentiate between the various types of keys with example.

(b) Explain data independence.

(c) Explain the concept of generalization, specialization and aggregation. Explain it with example.

5 (a) RoomMast(RoomNo, RoomType, Rate) **5**
Customer(CustName, City, RoomNo, AllocateDate, StayDays)
RoomType : Super, Normal, Double
Rate is daily room rate.

(1) Display the name of all customers who are living in RoomType "Super" for more than 2 days per visit.

(2) Display the RoomType which is used maximum time.

(3) Display the name of all customers who visited Hotel between 20-Jan-2009 to 25-Jan-2009.

(4) Delete all records before 2-Jan-2009.

(5) Create Foreign key RoomNo in customer table.

(6) Display total number of customers of "Surat" city.

(b) Using the tables described below : **5**

(1) ItemMaster(itemcode, itemdesc, rate)

(2) Cust(custno, cname)

(3) Ord(ordno, orddate, custno)

(4) OrdItem(orderno, itemcode, qtyOrd)

Describe FDs. Also explain in which NF the tables are at present ?
