



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)

नीचे दर्शावेल निशानीवाणी विगतो उत्तरवही पर अवश्य लभवी.  
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. : 

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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.

SB-1425]

1

[Contd...

- (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 3<sup>rd</sup> 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 ?