

SB-1425

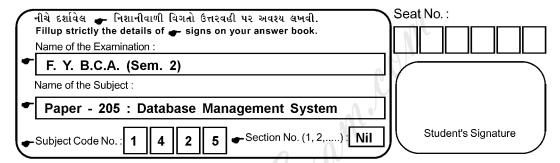
First Year B. C. A. (Sem. II) Examination March/April - 2011

Paper - 205: Database Management System

Time: 3 Hours [Total Marks: 70

Instructions:

(1)



- (2) Figure on the right indicate marks.
- (3) Take assumption whenever necessary.
- 1 Answer Following: (any seven)

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- (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)

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- (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.

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

3 Answer the following: (any two)

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- (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)

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- (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)
 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:

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- (1) ItemMaster(itemcode, itemdesc, rate)
- (2) Cust(custno, cname)
- (3) Ord(ordno, orddate, custno)
- (4) OrdItem(orderno, itemcode, gtyOrd)

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

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