

- (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 ?
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