

VPM's
DR VN BRIMS, Thane
Programme: MMS (2014-16)
Third Semester (IT) Examination October 2015

Subject	DBMS		
Roll No.		Marks	60 Marks
Total No. of Questions	7	Duration	3 Hours
Total No. of printed pages	2	Date	31.10.2015

Note: Q1 is compulsory and solve any FOUR from the remaining SIX questions.

Q1) 20 Marks (Compulsory)

Read the following case carefully.

Hospital Management System

Aim:

XYZ hospital is a multi-specialty hospital that includes a number of departments, rooms, doctors, nurses, compounders, and other staff working in the hospital. Patients having different kinds of ailments come to the hospital and get checkup done from the concerned doctors. If required they are admitted in the hospital and discharged after treatment.

The aim of this case study is to design and develop a database for the hospital to maintain the records of various departments, rooms, and doctors in the hospital. It also maintains records of the regular patients, patients admitted in the hospital, the check-up of patients done by the doctors, the patients that have been operated, and patients discharged from the hospital.

Description:

In hospital, there are many departments like Orthopedic, Pathology, Emergency, Dental, Gynecology, Anesthetics, I.C.U., Blood Bank, Operation Theater, Laboratory, M.R.I., Neurology, Cardiology, Cancer Department, Corpse, etc. There is an OPD where patients come and get a card (that is, entry card of the patient) for check up from the concerned doctor. After making entry in the card, they go to the concerned doctor's room and the doctor checks up their ailments. According to the ailments, the doctor either prescribes medicine or admits the patient in the concerned department. The patient may choose either private or general room according to his/her need. But before getting admission in the hospital, the patient has to fulfill certain formalities of the hospital like room charges, etc. After the treatment is completed, the doctor discharges the patient. Before discharging from the hospital, the patient again has to complete certain formalities of the hospital like balance charges, test charges, operation charges (if any), blood charges, doctors' charges, etc.

Next we talk about the doctors of the hospital. There are two types of the doctors in the hospital, namely, regular doctors and call on doctors. Regular doctors are those doctors who come to the hospital daily. Calls on doctors are those doctors who are called by the hospital if the concerned doctor is not available.

Based on the above case, solve the following questions:

1. List down all possible names of tables for the above database, write small (2 lines) description for each table, and write constraint for each table.
2. Draw one complete E-R diagram for the above Hospital Management System, with all attributes, relationships, etc.

Attempt Any FOUR from the Remaining SIX Questions

Q2) Any two from (a) or (b) or (c) ————— (5x2) = 10 Marks

- a) Explain the job of a DBA.
- b) What is DBMS and explain the features of a good database design.
- c) Explain the evolution of DBMS.

Q3) Any two from (a) or (b) or (c) ————— (5x2) = 10 Marks

- a) Explain the concept of Normalization.
- b) What is RDBMS? Explain different RDBMS terminologies.
- c) Explain the term ACID.

Q4) Any two from (a) or (b) or (c) ————— (5x2) = 10 Marks

- a) Explain DDL, DML, DCL and DTL commands, with one example each.
- b) Explain different types of Locks.
- c) Explain database modeling lifecycle.

Q5) Any two from (a) or (b) or (c) ————— (5x2) = 10 Marks

- a) What are triggers? Explain with a syntax/example. Write the benefits of Trigger.
- b) Explain the common database design mistakes.
- c) Explain different types of Joins, with examples.

Q6) Any two from (a) or (b) or (c) ————— (5x2) = 10 Marks

- a) What are SQL constraints? Which constraints do we use while creating a table?
- b) Explain UPDATE command with example.
- c) What are 'Wildcards' in SQL?

Q7) Any two from (a) or (b) or (c) ————— (5x2) = 10 Marks

- a) What is 'Subquery'? What do we use it? Explain with an example.
- b) i) Find all the customer details from the table "Customers" who live in the "city" starting with 'a', 'b', or 'c'.
ii) Find the customers from the table "Customers" who has a pattern "an" in their name.
- c) Design a database for a shopping mall.