Code No: MC1331/R13

MCA III Semester Regular/ Supplementary Examinations, November-2016

DATA BASE MANAGEMENT SYSTEMS

Time: 3 Hours **Max. Marks: 60**

Answer Any **FIVE** *Questions*
All Questions Carry Equal Marks

1. a Draw the E/R diagram for hospital database management system. 8
   b Explain the importance of Views in detail. 4

2. Consider the SAILOR DATABASE 12
   Sailors (sid:string, sname:string, rating:integer, age:real)
   Boats (bid:integer, bname:string, color:string)
   Reserves (sid:integer, bid:integer, day:date)
   Based on the above schemas answer the following queries.
   Based on the above schema, write the corresponding SQL queries for the following?
   i. Find the colors of boats reserved by Lubber**.**
   ii. Find the names of sailors who have reserved at least one boat.
   iii. Find the names of sailors who have reserved a red or green boat.
   iv. Find the names of the sailors who have reserved both a Red boat and a Green boat.
   v. Find names of sailors who have reserved all boats.
   vi. Find all sailors with a rating above 7.

3. a Explain FIRST, SECOND and THIRD normal forms. 6
   b Explain BCNF and the properties of decompositions. 6

4. a Write the ACID Properties? 4
   b Explain Lock Based Concurrency Control in detail. 8

5. a Explain Indexed Sequential Access Methods (ISAM). 6
   b Explain B+ Trees with an example. 6

6. a Explain relational database model in detail. 6
   b Explain the importance of Trigger in SQL. 6

7. a How do you measure the performance of locking? Explain. 6
   b Explain the importance of Hash based indexing. 6

8. a Explain Fifth Normal Form with an example. 6
   b Explain the expressive Power of Algebra and Calculus. 6

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