

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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