

H.T.No.

--	--	--	--	--	--	--	--	--	--

Code No: CS1902

GEC-R14

M. Tech I Semester Regular/Suppl. Examinations, January 2017

DATABASE MANAGEMENT SYSTEMS

(Computer Science Engineering)

Time: 3 Hours

Max. Marks: 60

Note: Answer any **FIVE** questions. All Questions carry equal Marks.

5 × 12 = 60M

1. a) Write a note on DBMS? Explain Database System Applications. (8M)
b) With an example explain how weak and strong entities are represented in ER Model. (4M)
2. a) Explain how the GROUP BY clause works? What is the difference between WHERE and HAVING clauses? Explain them with the help of an example for each. (6M)
b) Make use of following Tables for writing Nested Queries or Sub Queries in SQL
Sailors (sid, sname, rating, age)
Boats (bid, bname, color)
Reserves (sid, bid, date)
 - i. Find the names of sailors who reserved Red boat
 - ii. Find the names of sailors who reserved boats on 11-01-2015 (6M)
3. a) What is Multi Valued Dependency? Explain 4NF with an example. (8M)
b) Explain the concept of Loss less and lossy decompositions with an example (4M)
4. a) Define the concept of schedule for a set of concurrent transaction. Give a suitable example. (6M)
b) Explain in detail about Time stamp based protocols for concurrency control. (6M)
5. a) Write short note on Media recovery. (6M)
b) Compare and contrast the features of log based recovery mechanism versus Check point based recovery mechanism. (6M)
6. (a) What is deadlock? Explain how it is handled? (6M)
(b) Explain the categorizations of schedules based on serializability. (6M)

7. a) What is a view? What are its advantages in databases? Write a SQL syntax for creating a view. (6M)
- b) What is the composite attribute? How to model it in the ER diagram? Explain with an example. (6M)
8. a) What is redundancy? What are the different problems encountered by redundancy? Explain them. (6M)
- b) Differentiate between B trees and B+ trees. (6M)
