

Code No: 54013

R09

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech II Year II Semester Examinations, November/December - 2015

DATABASE MANAGEMENT SYSTEMS

(Common to CSE, IT)

Time: 3 hours

Max. Marks: 75

Answer any five questions
All questions carry equal marks

- 1.a) What is a database? Discuss database system applications.
b) Discuss the responsibilities and duties of database administrator. [8+7]
- 2.a) Discuss about participation constraints and overlap constraints.
b) Construct an ER diagram for a shopping mall such as Reliance mart. [8+7]
- 3.a) What is the significance of integrity constraints? Explain with examples.
b) Define the terms: cardinality, relation, relation schema, relation instance. [8+7]
4. Consider the following schema to write queries in SQL.
EMP(cid,ename,ccity)
COMPANY(cid,cname,ccity)
WORKS_FOR(cid,cid,salary)
MANAGES(eid, mid)
Manager is also an employee.
a) Find the employees who are working for "L&T" company.
b) Find the employees who reside in the same city in which their company is located.
c) Find the companies located in the city where "Panyam cement" is present.
d) Find the expenditure towards salaries for "P&G" located at "Hyderabad".
e) Find the managers for the company with id 2345. [3+3+3+3+3]
- 5.a) Explain second and third normal forms. Why BCNF is preferred over 3NF.
b) What is meant by canonical cover? Explain the process of finding it. [8+7]
- 6.a) Describe the optimistic concurrency control.
b) What is a precedence graph? What is its use in transaction management?
c) Explain multiple granularity. [5+5+5]
7. Is it possible to revert back to normal system after a system crash without a recovery manager? Justify your answer. Use suitable examples to support your argument. [15]
- 8.a) What alternatives are available for the data entries in an index? Explain.
b) Explain in detail heap file organization with indexes. [8+7]