PVP 14

Code: CS5T1

III B.Tech - I Semester – Regular/Supplementary Examinations
October 2017

DATABASE MANAGEMENT SYSTEMS
(COMPUTER SCIENCE AND ENGINEERING)

Duration: 3 hours Max. Marks: 70

PART – A

Answer ***all*** the questions. All questions carry equal marks
11x 2 = 22 M

1.

a) Define entity and attribute with examples.
b) When not to use DBMS?
c) Why are tuple in a relation not ordered?
d) What is the difference between a Primary key and foreign key?
e) What is a transaction? How does it differ from an Update operation?
f) What is bottom-up design and top-down design methodologies?
g) What is SQL schema? Write Importance of SQL schema.
h) What is the main idea of Multi valued Dependency?
i) When not to use normal forms?
j) What are Transaction Rollback and Cascading Rollback?
k) What is checkpoint and Fuzzy Check pointing?

PART – B

Answer any ***THREE*** questions. All questions carry equal marks.
3 x 16 = 48 M

2.a) Write the advantages of using a DBMS and the capabilities that a good DBMS should possess. 12 M

b) What is the difference between procedural and nonprocedural DMLs? 4 M

3. Describe the set operations of relational algebra, including union (U), inter section (∩), set-difference (-), and cross product. For each, what can you say about the cardinality of their input and output tables? 16 M

4.a) Draw UML class diagram and ER diagram for college database and compare them. 12 M

b) Write types of Entity attributes. 4 M

5.a) Discuss Normal Forms Based on Primary Keys. 8 M

b) Discuss insertion, deletion, and modification anomalies. Why are they considered bad? Illustrate with examples. 8 M

6.a) Explain different types of locks that can be applied in brief. 8 M

b) Discuss the following terminology in Transaction support in SQL: 8 M

i) Access mode
ii) Isolation level
iii) Dirty read
iv) No repeatable read