B.Tech II Year I Semester (R15) Regular & Supplementary Examinations November/December 2017
DATABASE MANAGEMENT SYSTEMS
(Common to CSE and IT)

Time: 3 hours   Max. Marks: 70

PART – A
(Compulsory Question)
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1   Answer the following: (10 X 02 = 20 Marks)
   (a) Difference between file system and DBMS.
   (b) What is relationship set? Define the "integrity rules".
   (c) List the table modification commands in SQL give one example.
   (d) Define the terms: (i) DDL. (ii) DML.
   (e) What is redundancy?
   (f) What are axioms?
   (g) What are the disadvantages of not controlling concurrency?
   (h) When are two schedules conflict equivalent?
   (i) What is an index in database?
   (j) What is the basic difference between static hashing and dynamic hashing?

PART – B
(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2   With a neat diagram, explain the structure of a DBMS.

OR

3   Draw E-R diagram for university. A university registrar's office maintains data about the following entities:
   (a) Courses, including number, title, credits, syllabus and prerequisites.
   (b) Course offerings, including course number, year, semester, section number, instructor (s), timings and
        classroom.
   (c) Students, including student-id, name and program.
   (d) Instructors, including identification number, name, department and title.

UNIT – II

4   What is a joint? Explain various types of joints.

OR

5   (a) What is view in SQL? How is it defined? Explain with an example.
   (b) What are aggregate functions? And list the aggregate functions supported by SQL?

UNIT – III

6   (a) What is meant by functional dependencies?
   (b) Explain the desirable properties of decomposition.

OR

7   (a) What is meant by referential integrity?
   (b) Explain trivial dependency.

UNIT – IV

8   Explain the concepts of serializability.

OR

9   Explain different locking mechanisms used in lock based concurrency control.

UNIT – V

10   Explain difference between Hash indexes and B+-tree indexes. In particular discuss how equality and
       range searches work, using an example?

OR

11   What is Undo and Redo logging explain with examples.

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