Code: IT4T2

II B.Tech - II Semester – Regular/Supplementary Examinations
April 2018

DATABASE SYSTEMS
(INFORMATION TECHNOLOGY)

Duration: 3 hours   Max. Marks: 70

PART – A

Answer *all* the questions.   All questions carry equal marks

11 x 2 = 22

1.
   a) Write the difference between DDL and DML.
   b) Define candidate key.
   c) Write the syntax of UPDATE command.
   d) Write the format of Tuple Relational Calculus Query.
   e) What is referential integrity constraint?
   f) Define functional dependency.
   g) Write the definition of BCNF.
   h) List the transaction properties.
   i) What is serializability?
   j) What are 'Where' clause predicates?
   k) What is week entity? Draw the diagrammatic representation.

PART – B

Answer any ***THREE*** questions.   All questions carry equal marks.
$$3 \times 16 = 48 \text{ M}$$

2.a) What are the advantages of DBMS over File systems?   8 M

b) Write and explain various data models.   8 M

3. Explain the following operations in Relational Algebra with
   Examples   16 M
      i) JOIN   ii) RENAME iii) DIVISION iv) SELECTION

4.a) Explain about Integrity Constraints and Enforcing Integrity
      Constraint.   8 M

b) Explain the features of E-R Diagrams with suitable
   examples.   8 M

5.a) What is MVD and write the MVD axioms?   8 M

b) Explain 4NF and uses of 4NF with examples.   8 M

6.a) Explain two phase locking protocol with examples.   8 M

b) Explain the phases of Concurrency control and Recovery
   using Algorithm.   8 M