MID SEMESTER EXAMINATION   MARCH 2016

CO/SE-211 DATABASE MANAGEMENT SYSTEM

Time: 1:30 Hours   Max. Marks : 20

Note :   Answer all Questions
Assume suitable missing data, if any.

Q1. (a) What are terms associated with ER model. Draw extended ER diagram for a University employee system.   3

(b) What are key, primary key, candidate key and super key? What is the difference between them, explain with example.   2

Q2. What is database architecture? Also explain data independence in detail.   2

(b) Write statements for creating university database including primary and foreign keys, constraints and inserting values in each table.   3

Q4) (a) What is closure.
   Compute the closure for relational schema
   $R=\{A,B,C,D,E\}$
   $A \rightarrow BC$
   $CD \rightarrow E$
   $B \rightarrow D$
   $E \rightarrow A$
   List candidate keys of R.   3

(b) Define BCNF and 3NF. Explain the difference with examples.   2

Q5 Explain the following   5
   (a) Functional Dependencies
   (b) DBA
   (c) Relational Algebra
   (d) Relational Calculus
   (e) Schema based constraints