EJ – 1223

V Semester B.E. (CSE/ISE) Degree Examination, June/July 2015
(2K11 Scheme)
CI 51 : DATABASE MANAGEMENT SYSTEMS

Time : 3 Hours Max. Marks : 100

Instruction : *Answer **any five** questions, selecting at least **two** from **each** Part.*

PART – A

1. a) Bring out the differences between file approach and DB approach. **10**
   b) Write the intended uses of a DBMS. **5**
   c) Write a note on database languages. **5**
2. a) Give an ER diagram for student database, with all essential ER concepts. **12**
   b) Write the proper naming of schema constructs with examples. **8**
3. a) Explain the mapping ER models to relations. **8**
   b) Explain σ, π, ∞ and $*$ with example. **8**
   c) What is union compatibility ? Give example. **4**
4. a) Explain SELECT command in detail. **12**
   b) Consider the following database of student enrollment in courses and books adopted for each course : **8**

   STUDENT (regno : string, name : string, major : string, bdate : date)

   COURSE (Course_No : int, Cname : string, dept : string)

   ENROLL (regno : string, Course_No : int, Sem : int, marks : int)

   BOOK_ADOPTION (Course_No : int, Sem : int, book_ISBN : int)

   TEXT (Book_ISBN : int, book_title : string, Publisher : string, author : string)

   i) Demonstrate how you add a new text book to the database.

   ii) Produce a list of books (include Course_No, Book_ISBN, Book_title) in the alphabetical order for courses offered by the CS department that use more than two books.

   iii) List any department that has all its adopted books published by a specific publisher.

   Show the results for all queries.

P.T.O.

PART – B

5. a) Explain the informal design guidelines for relational schemas. **10**

   b) Explain the following dependencies : **10**

      i) DKNF

      ii) BCNF

      iii) Inclusion dependencies

      iv) Functional dependencies.

6. a) Explain hashing technique with examples. **10**

   b) Write multilevel and multiple key indexes with examples. **10**

7. a) Explain MS ACCESS architecture. **10**

   b) Explain the ORACLE languages and interfaces briefly. **10**

8. Write a short note on : **(5×4=20)**

   i) Data warehousing

   ii) WWW databases

   iii) Text and digital library databases

   iv) Parallel databases.
