JE – 825

VI Semester B.E. (CSE/ISE) Degree Examination, June/July 2013
(Y2K6 Scheme)
CI 6.2: DATABASE MANAGEMENT SYSTEM

Time : 3 Hours   Max. Marks : 100

Instruction : *Answer **any five full** questions choosing atleast **two** from*

each Part.

PART – A
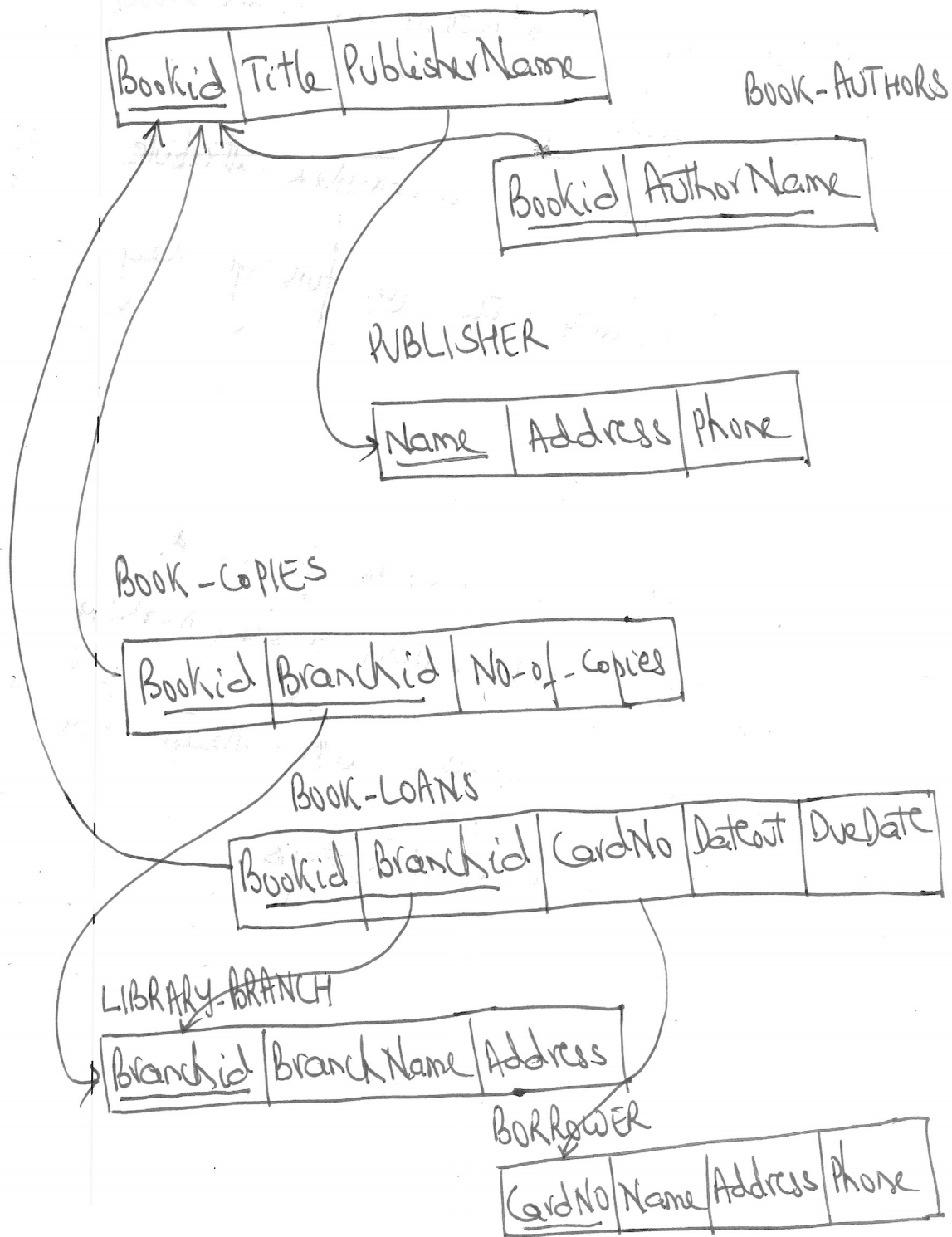
1. a) Explain the architecture of DBMS with a neat diagram.   **8**

   b) Discuss the classification of Database Management System.   **6**

   c) Write a note on DBMS languages.   **6**

2. a) Explain the following with an example for each   **10**

     i) entity   ii) complex attribute

    iii) cardinality ratio   iv) foreign key

     v) Null valves.

   b) Write the E-R diagram for a air-ticket reservation system making suitable

      assumptions, with atleast five entities and relationships.   **10**

3. a) Explain the ER-to-relational mapping procedure, explaining each step with

      an example.   **10**

b) Consider the LIBRARY relational schema shown below, which is used to keep track of books, borrowers and book loans.

Book

Write the relational expressions for the following queues

i) how many copies of the book titled 'The Lost Tribe' are owned by the library branch whose name is 'sharptown ?

ii) For each book that is loaned out from the 'Sharptown' branch and whose due date is today, retrieve the book title, the borrower's name and the borrower's address. **10**

4. a) What is a view in SQL ? How is it defined ? Discuss the problems that may arise when one attempts to update a view. How are views typically implemented ? **10**

b) Consider the following relational schema

Emp. (eid, ename, age, sal)

Works (eid, pid, no-of-hrs, did)

Dept (did, dname, Mgrid)

Project (pid, pname)

Write SQL statements to

i) give every employee of did='6' a 10% raise in salary.

ii) add 'John' as an employee with eid = '99', age = '30' and salary = '15,000'.

iii) delete the 'Research' department and explain what happens when this statement is executed. **10**

PART – B

5. a) What are update anomalies ? Explain with an example. **10**

b) Give the algorithm to determine X^+, the closure of X under F. Give an example. **10**

6. a) Define functional dependency. Explain BCNF with an example. **10**

b) Define multivalved dependencies and join dependencies with examples. **10**

7. a) Explain the oracle architecture with a neat diagram. **10**

b) What are the different ways of describing knowledge during data mining ? **10**

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

i) Data warehousing ii) Spatial databases

iii) Association rules iv) Mobile databases.

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