



12523/E 230

Reg. No.

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V Semester B.C.A. Degree Examination, Oct./Nov. 2012
DATABASE MANAGEMENT SYSTEMS

Time : 3 Hours

Max. Marks : 80

Instructions : i) Answer **any five** full questions.
ii) Draw **neat** diagrams **wherever** necessary.

1. a) Define data, database and DBMS. What are the basic tasks of a DBMS ?
b) Explain the simplified database system environment with diagram.
c) Explain any three characteristics of database approach. **(4+6+6=16)**
2. a) Explain with diagram the three schema architecture.
b) Explain different DBMS languages.
c) Explain the database system environment (component model). **(4+4+8=16)**
3. a) Differentiate between :
i) Simple attributes v/s composite attributes
ii) Singled valued v/s multivalued attributes.
iii) Stored attributes v/s derived attributes.
b) What do you mean by :
i) Seek time
ii) Rotational delay.
c) Explain different operations on files. **(6+2+8=16)**
4. a) Discuss the informal design guide lines for relation schemas.
b) What is normalization ? Explain any two normal forms with examples. **(8+8=16)**
5. a) Specify and execute the following queries in relational algebra :
i) For every project located in 'Belgaum' list the project number, controlling department and manager's last name address and birth date.
ii) Find the names of employees who work on projects controlled by department number 5.
b) Explain various set theory operations of relational algebra. **(8+8=16)**

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6. a) Give the syntax for the following SQL commands :
- i) Create table
 - ii) Alter table
 - iii) Inserting records
 - iv) Deleting records.
- b) Discuss the different data types in SQL.
- c) Write a short note on view in SQL. **(8+4+4=16)**
7. a) Explain procedures and packages in PL/SQL.
- b) What is a transaction ? Explain the properties of transaction.
- c) Explain locking techniques for concurrency control. **(6+6+4=16)**
8. Write short notes on **any four** of the following :
- a) End users.
 - b) Data models.
 - c) Double Buffering.
 - d) Triggers.
 - e) DBMS Interfaces.
 - f) Serializability. **(4×4=16)**
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