



32523/E 230

Reg. No.

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V Semester B.C.A.3 (Regular) Examination, November/December 2017
DATABASE MANAGEMENT SYSTEM

Time : 3 Hours

Max. Marks : 80

Instruction: Draw diagrams *wherever* necessary.

PART – A

I. Answer **any ten** questions : **(10×2=20)**

- 1) a) What are the tasks done by DBMS ?
- b) Define the term metadata.
- c) What do you mean by controlled redundancy ?
- d) Who is an end user ? Mention their categories.
- e) What is relationship type ? What are their types ?
- f) Define primary and foreign key.
- g) What is entity and attribute ?
- h) Define schema.
- i) Give the difference between COMMIT, ROLLBACK.
- j) Define transaction. Give example.
- k) List various aggregate function with example in SQL.
- l) What is data model ? Give various categories.

PART – B

II. Answer **any four** questions : **(5×4=20)**

- 2) Explain various actors on the scene.
- 3) Explain various DBMS languages with example.

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- 4) Define attributes and explain different types of attributes.
- 5) Explain with example the operations UNION, INTERSECTION and MINUS of relational algebra.
- 6) Define transaction and explain various states of transaction.
- 7) Explain the types of locks for concurrency control.

PART – C

- III. Answer **any four full** questions : **(10×4=40)**
- 8) a) Explain the characteristics of DBMS in detail.
b) List the workers behind the scene. **(8+2=10)**
 - 9) a) Draw the ER diagram for company database.
b) Explain logical and physical data independence. **(6+4=10)**
 - 10) a) Explain the characteristics of relation.
b) Draw the simplified database system environment. **(5+5=10)**
 - 11) a) Explain first and second normalized form.
b) Explain UPDATE and DROP SQL command. **(5+5=10)**
 - 12) a) What is unary relational operator ? Explain SELECT and PROJECT operations.
b) What do you mean by recovery in transaction processing ? Discuss the various failures with respect to recovery. **(5+5=10)**
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