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**41424/D240**



Reg. No.

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IV Semester B.C.A.4 Degree Examination, May - 2019  
**DATABASE MANAGEMENT SYSTEM (Regular)**

**Theory**  
**(RCU Fresh 2018-19)**

Time : 3 Hours

Max. Marks : 80

- Instructions :** (1) *All Sections are compulsory.*  
(2) *Draw diagrams wherever necessary.*

**SECTION - A**

1. Answer **all 10** questions, 2 marks each. **10x2=20**
- (a) What is Database Management System ?
  - (b) Define data model.
  - (c) What is tuple and attribute ?
  - (d) What is an Entity type ? Give an example.
  - (e) Give an example of primary key.
  - (f) What is domain integrity constraints ?
  - (g) What is Relational Algebra ?
  - (h) Define the term Normalization.
  - (i) What is SQL ? Write a syntax for UPDATE command.
  - (j) What is PL/SQL ? Write a basic structure of PL/SQL.

**SECTION - B**

- Answer **any 4** questions 5 marks each. **4x5=20**
2. Describe the architecture of Three schema with a neat diagram.
3. Discuss the following attributes :
- (i) Composite attributes
  - (ii) Multivalued attributes
  - (iii) Simple attributes

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4. Describe the SELECT and PROJECT Operations of Relational Algebra.
5. What is Constraint ? Explain any 4 constraints with an example.
6. Write a PL/SQL program to find the greatest among three numbers.

### SECTION - C

Answer **any 4** questions, **10** marks each.

**4x10=40**

7. (a) Enlist the characteristics of database approach and explain all of them. **8+2**  
(b) Write any 2 advantages of using DBMS.
8. (a) Discuss the main activities of database end-users. **4+6**  
(b) Explain with example the operations UNION, INTERSECTION and MINUS of Relational algebra.
9. (a) Explain the 2<sup>nd</sup> Normal form with suitable example. **5+5**  
(b) Discuss the informal design guidelines of Relational Schemas.
10. (a) Write a PL/SQL program using for loop to insert even numbers between 1 to 10 into temp table. **5+5**  
(b) Give the syntax and examples for ALTER and DROP command.
11. Write **any 5** short notes on the following : **5x2=10**
  - (i) Data and data state
  - (ii) Schema
  - (iii) DBA
  - (iv) E-R diagram with an example
  - (v) Functional dependency
  - (vi) PL/SQL stored procedure

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