



AC-3720
First Year B. C. A. (Sem. II) Examination
March/April – 2015
Paper - 205 : Database Management System

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

<p>नीचे दर्शायेव निशानीवाणी विगतो उत्तरवही पर अवश्य कपनी. Fillup strictly the details of signs on your answer book.</p> <p>Name of the Examination : FIRST YEAR B. C. A. (SEM. II)</p> <p>Name of the Subject : PAPER - 205 : DATABASE MANAGEMENT SYSTEM</p> <p>Subject Code No. : 3 7 2 0 Section No. (1, 2,...): Nil</p>	<p>Seat No. : <input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/></p> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; text-align: center; width: 100%;">Student's Signature</div>
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(2) Figures on the right indicate marks.

(3) Make assumptions whenever necessary.

1 Answer the following: **(any seven)** 14

- (i) Explain prime and non-prime attributes.
- (ii) What do you mean by Domain Integrity?
- (iii) List various DDL, DML commands.
- (iv) Define Database Schema. What are the various types of schemas?
- (v) How to create relationship among tables?
- (vi) Give the difference between DROP and TRUNCATE command.
- (vii) Define Functional Dependency. Which functional dependency is achieved in 2NF?
- (viii) Explain Disjoint and Overlapping participation constraints.

- 2 Answer the following: (any three) 18**
- (i) Explain concept of Generalization, Specialization and Aggregation. Explain all through proper example.
 - (ii) What is Functional Dependency? Explain various types of functional dependency.
 - (iii) Define Relationship and Relationship sets. Explain mapping cardinalities with example.
 - (iv) Explain various types of Armstrong's axioms.
- 3 Answer the following: (any two) 12**
- (i) What is decomposition? Explain with an example, decomposition which is lossless and dependency preserving both.
 - (ii) Explain giving an example how BCNF is better than 3NF.
 - (iii) Write a note on Relational Model.
- 4 Answer the following: (any three) 12**
- (i) Construct an E-R Diagram of a Banking System
 - (ii) Explain different database abstraction levels.
 - (iii) Explain Super Key, Candidate Key, Primary Key, and Composite Key.
 - (iv) Who is DBA? Explain the various functions of DBA.

- 5 (a) Write Queries for creating following tables with appropriate constraints: 4

Customer_Master (Cust_No, Cust_Name, Address, City)

Branch_Master (Branch_Id, Branch_Name, City)

Loan_Master (Loan_Id, Loan_Type)

Cust_Branch_Loan (Cust_No, Loan_Id, Branch_Id,
Loan_Amount)

- (b) Solve the following Queries: 10

(i) Display Customer who borrowed loan from 'Station' branch of 'Pune' city.

(ii) Display Customers who belong to Mumbai and borrowed 'Car Loan'.

(iii) Display Customer who borrowed loan of maximum amount from 'City Square' branch of 'Baroda' City.

(iv) Display Customer who has not borrowed any loan.

(v) Display citywise, branchwise total loans.
