COA 201 **Reg. No. ……**

CREDIT BASED SECOND SEMESTER B.C.A. DEGREE EXAMINATION
APRIL 2013
B. C. A.
DATABASE MANAGEMENT SYSTEM

Time: 3 Hrs **Max. Marks: 80**

PART – A

Answer any TEN questions from the following: **10x2=20**

1. a) Define the terms i) Dataase Schema ii) Weak entity
   b) What is data dictionary?
   c) Differentiate between stored and derived attributes.
   d) What is Super key of a relation?
   e) Deline the cardinality ratio for the binary relation.
   f) What do you mean by Normalisation?
   g) Differentiate between UNIQUE and PRIMARY KEY constraints.
   h) Give the general format of UPDATE command.
   i) Name any two Oracle DML commands.
   j) Explain the use of default clause in a table deline ties.
   k) What is the purpose of CHECK constraint in a table?
   l) Give the general format of PL/SQL block.

PART – B

Answer any TWO questions from each unit.

UNIT – I

2. a) Discuss the advantages of DBMS over file processing systems.
   b) Explain different types of database users. **(5+5)**

3. a) Explain various database system utilities.
   b) What is data independence? Explain logical and physical data independence. **(5+5)**

4. a) With neat diagram explain three scheme Architecture of Database System.
   b) Deline following terms of with reference to ER model
      i) Entity Set ii) Total participants constraint
      ii) Recursive relationship iv) Value sets **(5+5)**

UNIT – II

5. a) Discuss the characteristics of a relation that makes them different from ordinary tables.
   b) Explain SELECT and PROJECT operations of relational Algebra with examples. **(5+5)**

6. a) What is join? Explain any two types of join operations in Relational Algebra with examples.
   b) Explain the violation of integrity constraints in each of the three types of update operators. **(5+5)**

7. a) Deline 1NF and 2NF relations. How do you convert 1NF relation into 2NF relation? Explain with example.
   b) Explain insertion, deletion and modifications anomalies. Why are they considered to be bad? **(5+5)**

UNIT – III

8. a) Explain various data types supported by SQL.
   b) Differentiate between column level and table level constraints. How do you deline referential key constraint at column level and table level? **(5+5)**

9. a) Explain following predicates/functions with syntax and example.
      i) LIKE ii) MAX( ) iii) COUNT(*)
   b) Consider following tables.
      EMP (empno, ename, sal, deptno)
      DEPT (Deptno, dname, loc)
      Write SQL queries for the following

i) Retrieve Empno, ename and dname of each employee
ii) Count number of employees in each department **(6+4)**

10. a) What is explicit cursor? Explain various cursor processing commands with syntax and example.
b) What is trigger? Explain row, statement, Before and After triggers. **(5+5)**

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APRIL 2014
B.C.A
DATABASE MANAGEMENT SYSTEMS

Time: 3 Hrs **Max. Marks: 80**

PART – A

1. Answer any TEN questions from the following: **10x2=20**

a. Define schema and instance.
b. What is a primary key?
c. What is a relation? Give an example.
d. Define entity and attribute.
e. Differentiate between multivalued and composite attributes.
f. What is an equijoin?
g. Define 2NF relation.
h. Define union and intersection operations.
i. What is SQL?
j. What is a correlated nested query?
k. Write the syntax for CREATE TABLE command.
l. What is a cursor?

PART – B

Answer any TWO questions from each unit:

UNIT – I

2. a. State five advantages of using DBMS.
b. Describe the three schema architecture of a data base system. **(5+5)**

3. a. Explain the main categories of data models.
b. Explain the conventions for displaying an ER schema as an ER diagram. **(6+4)**

4. a. What are the different ways of classifying DBMS?
b. Explain any four DBMS interfaces. **(6+4)**

UNIT – II

5. a. Explain the entity integrity and referential integrity constraints.
b. Explain the characteristics of a relation that make them different from ordinary files and tables. **(6+4)**

6. a. Explain the following binary relational operations
i) join ii) division
b. What is normalization? How do you convert a 2NF into a 3NF relation? Give an example. **(4+6)**

7. a. Write a note on SELECT and PROJECT operations.
b. Explain the update operations on a relation. **(4+6)**

UNIT – III

8. a. What are the basic data types available in SQL?
b. Explain how the GROUP BY clause works. What is the difference between WHERE and HAVING clause? **(4+6)**

9. a. Explain the following functions.
a) COUNT (*) b) ROUND c) INITCAP
b. State any four advantages of PL/SQL **(6+4)**

10. a. What is a parameterized cursor? Give the syntax and example for declaring a parameterized cursor.
b. Explain commit, Rollback and savepoint commands with their syntax. **(6+4)**

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COA 201 Reg. No. ……

CREDIT BASED SECOND SEMESTER B.C.A. DEGREE EXAMINATION

APRIL 2015

B.C.A

DATABASE MANAGEMENT SYSTEMS

Time: 3 Hrs **Max. Marks: 80**

PART – A

1. Answer any TEN questions from the following: **10×2=20**

a. Define Database and DBMS.
b. What are data models? Name the different data models.
c. Define Data Independence.
d. What is Entity Type and Entity set?
e. What is a Data constraint?
f. What do you mean by Foreign Key? What is its purpose?
g. What is Relational Algebra? Give an example.
h. Define functional dependency.
i. Write the general syntax of INSERT statement.
j. What is a sub query? Give an example.
k. What is a database trigger?
l. Write any two aggregate functions in SQL with an example.

PART – B

Answer any TWO questions from each unit:

UNIT – I

2. a. Explain the advantages of DBMS.
b. Explain the various types of attributes with examples. **(5+5)**

3. a. Explain the different types of database users.
b. Explain weak entity types and partial key. **(6+4)**

4. a. Explain the various DBMS languages.
b. Explain the different symbols used in ER diagram. **(5+5)**

UNIT – II

5. a. Explain the characteristics of a Relation.
b. Explain the different types of joins with examples. **(5+5)**

6. a. Explain entity integrity and referential integrity constraints in data bases.

b. Explain SELECT and PROJECT operations of relational algebra with an example. **(5+5)**

7. a. Define 1NF and 2 NF relations. Explain with an example, how do you convert 1NF to 2 NF relation.

b. Define the following terms:

i) Relation schema ii) Relation state

iii) Primary key iv) Candidate key **(6+4)**

UNIT – III

8. a. Explain the different data types used in oracle.

b. Explain the syntax of CREATE and SELECT command with an example. **(4+6)**

9. a. Explain the pattern matching and Range searching operators in SQL with an example.

b. Explain the following with syntax and example. **(4+6)**

i) INITCAP ii) ROUND

iii) SUBSTR iv) COUNT

10. a. What is a cursor? Explain the cursor attributes.

b. Explain the general syntax for creating a Trigger with an example. **(5+5)**

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COA 201 Reg.No. .....

CREDIT BASED SECOND SEMESTER B.C.A. DEGREE EXAMINATION APRIL 2016

B.C.A

DATABASE MANAGEMENT SYSTEM

Time: 3 Hrs Max. Marks: 80

PART – A

1. **Answer any 10 questions from the following:** 10x2=20
   a. What is database Management system? Give an example.
   b. What is a Cursor? Explain.
   c. Differentiate between DDL and DML.
   d. Give any four notations used in E-R model.
   e. Define domain constraint.
   f. what is union compatibility of a relation?.
   g. Define BCNF relation.
   h. Give any two advantages of PL/SQL over SQL.
   i. Differentiate between Column level and table level constraint.
   j. What is a sub query? Give an example.
   k. List any four attributes of a Cursor.
   l. Differentiate between CHAR and VARCHAR data types in SQL .

PART – B

Answer any TWO questions from each unit:

UNIT – I

2. a. Explain various characteristics of database approach.
   b. What is data Model? Explain any two data models. (5+5)

3. a. Define the following terms.
      a. Logical data independence
      b. Conceptual schema
      c. DDL Compiler
      d. Relationship set
      e. Recursive Relationship
   b. What are database utilities? Explain any four database utilities. (5+5)

4. a. What are the responsibilities of DBA?
   b. Explain various types of attributes in E-R model with an example. (5+5)

UNIT – II

5. a. Explain entity integrity and referential integrity constraints.
   b. Explain UNION, INTERSECTION and Cartesian product operations in relational algebra with an example. (4+6)

6. a. Explain the various reasons that lead to the occurrence of NULL values in the relations.
   b. Write a note on constraint violations during insert, update and delete operations. (4+6)

7. a. What is Functional dependency? Write Armstrong's inference rules in their basic form.
   b. Define 2NF relation. With example explain how a relation is normalized into 2NF relations. (5+5)

UNIT – III

8. a. What is the purpose of ALTER TABLE command in SQL? Explain with general format and example.
   b. Explain any five aggregate Functions with syntax. (5+5)

9. a. Explain the following with examples.
   i) BETWEEN ii) GROUP BY iii) INSERT INTO
   b. Explain any two PL/SQL looping statements with its syntax. (6+4)

10. a. Consider a table Book containing fields bcode, bookname and price. Write a PL/SQL block to compute selling price of book. The discount depends on book code.

Book code	B1	B2	B3	B4
Discount	5%	10%	15%	25%

   b. What is trigger? Explain different types of triggers in PL/SQL. (5+5)

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