MS – 571

II Semester B.C.A. Examination, May 2016
(CBCS) (2014-15 and Onwards)
COMPUTER SCIENCE
BCA – 204 : Database Management System

Time : 3 Hours Max. Marks : 70

***Instruction** : Answer **all** Sections.*

SECTION – A

I. Answer **any ten** questions. **Each** question carries **two** marks. **(10×2= 20)**

1) Define DBMS. Mention any two advantages of DBMS.

2) What do you mean by DBMS catalog and metadata ?

3) Give any four functions of DBA.

4) Name any four types of attributes.

5) What do you mean by generalization and specialization ?

6) Define Primary key and Foreign key.

7) Define Functional dependency.

8) How are storage devices classified ?

9) What are the applications of Relational algebra in RDBMS ?

10) Mention the different categories of SQL statements.

11) What is an exception ? Mention major types of exceptions.

12) What are the desirable properties of transactions ?

P.T.O.

SECTION – B

II. Answer **any five** questions. **Each** question carries **ten** marks. **(5×10 = 50)**

13) a) Explain the functions of DBMS. 6

b) What is data independence ? Explain briefly the two types of data independence. 4

14) a) Define relationship. Explain briefly cardinality ratio constraint of Relationships. 5

b) Explain the E-R notations used in database schema design. 5

15) a) Explain various methods of allocating file blocks on disks. 6

b) Explain briefly RAID technology. 4

16) a) Explain briefly insertion, updation and deletion anomalies in database. 3

b) What is normalization ? Explain briefly the various types of Normal forms with examples. 7

17) a) Explain briefly schema based constraints in relational data model. 5

b) Explain selection and projection operations in relational algebra with an example each. 5

18) a) Explain briefly DDL statements with syntax and examples. 4

b) What is JOIN operation ? Explain different types of joins with syntax and example. 6

19) a) What is a database trigger ? Explain any four types of trigger. 5

b) Explain While.. Loop statement in PL/SQL with an example. 5

20) a) Define transaction. Explain briefly different states of transaction with a neat state transition diagram. 6

b) What is time stamp ? Explain briefly two methods of generating time stamps. 4

US – 639

II Semester B.C.A. Examination, May 2017
(F + R) (CBCS) (2014-15 and Onwards)
COMPUTER SCIENCE
BCA 204 : Database Management System

Time : 3 Hours

Max. Marks : 70

Instruction : *Answer* ***all*** *Sections.*

SECTION – A

Answer **any ten** questions. **Each** question carries **two** marks. **(10×2=20)**

1. Define DBMS. Mention one application of DBMS.
2. Define Query. Give an example.
3. Define Schema and an Instance.
4. Define Entity and Relationship.
5. Define Data Independence.
6. What is RAID ?
7. Explain Functional dependency.
8. Explain Domain and Tuple.
9. Explain Commit and Rollback commands.
10. Explain database Triggers.
11. Explain dirty read related to transaction processing system.
12. What is concurrency control ?

SECTION – B

Answer **any five** questions. **Each** question carries **ten** marks. **(5×10=50)**

13. a) Explain the advantages of DBMS. **5**
    b) Explain different people behind DBMS. **5**

P.T.O.

14. a) Explain data model and its types. 5

    b) Explain database environment. 5

15. a) Write an E-R diagram of employee salary database and also mention type of association between the entities. 5

    b) Explain one to one, one to many and many to many relationships with example. 5

16. a) Explain the structure of Hard disk. 5

    b) Explain internal and external hashing. 5

17. a) Explain design guidelines of relational schemas. 5

    b) Explain 2NF and 3NF with examples. 5

18. a) Explain different characteristics of relations. 5

    b) Explain Cartesian product and selection operations. 5

19. a) Write an SQL query for the following :

    a) To create a table of Hospital database with minimum 5 fields

    b) To insert two records

    c) To add new field

    d) To display all records. 6

    b) Explain different types of cursors. 4

20. a) Explain serial and non serial schedules. 5

    b) Explain lock and unlock operations for binary locks. 5

SM – 618

II Semester B.C.A. Examination, May/June 2018
(CBCS) (F + R) (2014-15 and Onwards)
COMPUTER SCIENCE
BCA 204 : Database Management System

Time : 3 Hours Max. Marks : 70

***Instruction** : Answer **all** Sections.*

SECTION – A

Answer **any ten** of the following. **Each** question carries **two** marks : **(10×2=20)**

1. Define :
   a) DBMS
   b) Data Model.
2. Define Data Independence. Mention the types.
3. Differentiate centralized database architecture and client server database architecture.
4. What is an entity ? Mention the types of entities.
5. Define RAID.
6. What are database anomalies ? Mention the types.
7. Define normalization.
8. Explain different data types in SQL.
9. Expand PL/SQL. Mention any two advantages.
10. What is a view ? Give the syntax for view creation.
11. List different types of failures.
12. What is concurrency control ?

P.T.O.

SECTION – B

Answer **any 5** of the following. **Each** question carries **10** marks : **(5×10=50)**

13. a) Explain the advantages of DBMS. **5**

    b) Explain three schema architecture. **5**

14. a) Define different types of keys. **5**

    b) Explain different Hashing Techniques. **5**

15. Draw an ER diagram for STUDENT DATABASE SYSTEM. **10**

16. a) Explain generalization and specialization with examples. **6**

    b) Explain trivial dependency. **4**

17. a) Explain Relational Algebra in detail. **5**

    b) Explain 1 NF, 2 NF, 3 NF. **5**

18. a) Explain different aggregate functions in SQL with syntax and examples. **5**

    b) What are JOINS ? Explain INNER JOIN and OUTER JOIN. **5**

19. a) Explain different DDL commands with syntax and example. **5**

    b) Create an EMPLOYEE Database using the following fields : **5**

Field name	**Data type**
EMPNO	NUMBER
ENAME	CHAR
DOB	Date
Dept	String
Salary	Real

    a) Create the table

    b) Enter 5 tuples

    c) Find sum of salaries of all employees

    d) Find highest and least salaries of all employees.

20. a) Explain ACID properties of a Transaction. **5**

    b) Explain different states of transaction. **5**

Q.P. Code : 15222

Second Semester B.C.A. Degree Examination, May/June 2019

(CBCS – Freshers)

Computer Science

Paper BCA 204 — DATABASE MANAGEMENT SYSTEMS

Time : 3 Hours] *[Max. Marks : 70*

Instructions to Candidates : Answers All Sections.

SECTION – A

Answer any **TEN** questions. Each question carries **2** marks : **(10 × 2 = 20)**

1. Define data and information.
2. Define Schema.
3. Define entity and relationship.
4. Define primary key with example.
5. What is the difference between DBMS and RDBMS?
6. What is DDL, DML?
7. Define data independence.
8. What is meant by normalization?
9. What is trigger?
10. What is meant by concurrency control?
11. Write the syntax and example for delete command.
12. What is exception? Mention its types.

SECTION – B

Answer any **FIVE** questions. Each question carries **10** marks : **(5 × 10 = 50)**

13. (a) Explain any five functions of DBMS. **(5)**

    (b) Explain the roles and responsibilities of DBA. **(5)**

14. (a) Write short notes on hierarchical and Network data model. **(5)**

    (b) Explain the architecture of DBMS. **(5)**

15. (a) Explain the different types of relationships used in DBMS. **(5)**

    (b) Explain about any two secondary storage devices with example. **(5)**

16. (a) Explain any two types of normalization with an example. **(5)**

    (b) What is join? Explain its types. **(5)**

17. (a) Write an SQL Query for student database :

    (i) Create a table with following fields.

    Regno (Primary key)

    name (text)

    m1 (number)

    m2 (number)

    (ii) Add the column college to the existing table.

    (iii) Delete the column m2 from the table.

    (iv) Display the details using select command. **(5)**

    (b) Explain the different types of cursors. **(5)**

18. (a) Write a PL/SQL Program to perform the basic arithmetic operations. **(5)**

    (b) Write a PL/SQL Program to find out the given year is leap year or not. **(5)**

19. (a) Explain different types of trigger. **(5)**

    (b) Explain any 5 SQL Queries with an example. **(5)**

20. (a) Explain different types of Lock. **(5)**

    (b) What is meant by time stamp? Explain any two methods with an example. **(5)**
