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

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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**

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