



**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)

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| 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 |
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