MS – 571

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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**