

**M.Sc. (Part-I) Semester-II (CBCS Scheme) Examination**

**COMPUTER SOFTWARE (Old) (Upto Summer-2019)**

**(RDBMS)**

**Paper-VII**

Time : Three Hours]

[Maximum Marks : 80

**Note :-** (1) All questions are compulsory.

(2) Due credit will be given to neatness and adequate dimensions.

(3) Assume suitable data wherever necessary.

1. (A) Explain the architecture of a DBMS. 8
- (B) What is logical data independence ? Why it is important ? Explain. 8

**OR**

2. (A) How is the data represented in the relational model ? Explain. 8
- (B) State and explain the benefits of RDBMS over file oriented system. 8
3. (A) Explain the selection and projection operations in relational algebra and calculus. 8
- (B) What are Joins ? Explain the type of joins in relational algebra. 8

**OR**

4. (A) Explain the 3NF with example. 8
- (B) How to transform the conceptual model to a relational model ? Explain with example. 8
5. (A) Explain the process of authentication in client server database system. 8
- (B) Explain the process of database connectivity using data controls in VB. 8

**OR**

6. (A) How to manipulate the data on server in client-server technology ? Explain. 8
- (B) Explain the role of Visual Basic in developing client applications. 8

7. (A) What are the factors involved in improving the disk performance? Explain. 8  
 (B) Explain the concept of balanced tree indexing. 8

OR

8. (A) State and explain different data storage formats on disk. 8  
 (B) Explain the bottlenecks that affect the performance of database. 8  
 9. (A) What are privileges? Explain how to grant and revoke the privileges with syntax and example. 8  
 (B) What is DDS? Explain the general DDS model. 8

OR

10. (A) Explain the function and goals of TBA. How is it important to maintain database security? 8  
 (B) Explain the design issues of DDS. What is data integrity in DDS? 8