MSC 3rd semester examination, 2018

Subject : Computer Science

Paper :MCS 303

Time: 2hrs Full Marks:45

Answer any nine of the following questions: 5x9=45

1. Describe the three levels of data abstraction? 5

2. What is a view? How it is related to data independence? 5

3. Design an Entity Relationship Diagram describing Electricity Billing Management System. 5

4. Differentiate between database security and database integrity. 5

5. Consider a relation R with attributes ABCDEFGH and functional dependencies S as follows:

S = {A → CD, ACF → G, AD → BEF, BCG → D, CF → AH, CH → G, D → B, H → DEG}

Find all keys for R. 5

6. Consider a relation R(A, B, C, D) with FD's AB → C, AC → B, BC → A, B → D.

Determine all the keys of relation R. Hence find the normal form of R

7 .Discuss different fragmentation techniques of DDBMS

8. Discuss semijoin strategy

9. write second phase of two phase commit protocol

10. Discuss one deadlock detection algorithm in distributed database system

11 . write different join operations using SQL command