(i) Printed Pages : 2 Roll No. .....

(ii) Questions : 9 Sub. Code : 1 7 3 9 1

Exam. Code : 0 0 0 4

B.A./B.Sc. (General) 4th Semester

(2055)

COMPUTER SCIENCE

Paper-CS07-Data Base Concepts

Time Allowed : Three Hours] **[Maximum Marks : 30**

Note :— Attempt ***five*** questions in all selecting one question from each of the units I, II, III, and IV and the compulsory question number 9.

UNIT—I

1. Compare and contrast traditional file systems and database systems. Why is database approach preferred ? Give some key reasons. 6

2. Define DBMS. What are the advantages, disadvantages and implications of this approach ? 6

UNIT—II

3. What is the importance of Entity Relationship model ? Develop and implement for any practical problem of your own choice. 6

4. What is Data Model ? Compare and Contrast relational, network and hierarchical model for their key features. Exemplify any one model of your choice. 6

UNIT—III

5. Why is relational algebra used ? How do you apply union, intersection, difference and Cartesian product through the organization of various relations ? 6

6. Draw difference between tuple oriented and domain oriented relational calculus. 6

UNIT—IV

7. What is Normalization ? Support your answer through the implementation of First, Second and Third Normal Forms. 6

8. Explain the concepts of "Database Integrity" and "Database Security" in detail. 6

(Compulsory)

9. Explain :

   (a) Data Independence

   (b) Codd's Rules

   (c) Relational Algebra Queries

   (d) Distributed Databases. 1.5×4=6