Exam. Code : 107203
Subject Code : 1761

Bachelor of Computer Application (BCA) 3rd Semester
DATABASE MANAGEMENT SYSTEM
Paper—II

Time Allowed—3 Hours] [Maximum Marks—75

Note :—There are **EIGHT** questions. Candidates are required to attempt any **FIVE** questions. All questions carry equal marks.

1. Elaborate the three-level architecture of database systems. Why we need mapping between levels ? Briefly discuss components of a DBMS. 15

2. Give comparison of Relational, Hierarchical and Network model. 15

3. Describe the similarities and dissimilarities between BCNF and 3rd normal form. Discuss a case where fourth normal form is applicable and how it removes the anomalies. 15

4. Define concurrency. How concurrency is controlled using lock based protocols ? Explain with an example. 15

5. (A) What do you understand by the term views ? Give their advantages. 7

 (B) Discuss the use of UNION, INTERSECTION and MINUS set operators in subqueries. 8

6. What is a cursor in SQL ? Explain its type. How to create explicit cursor in SQL ? 15

7. Compare and evaluate between NoSQL, MySQL and Oracle. 15

8. Describe the term Big Data and its significance. Explain its architecture. 15