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B.E / B.Tech / B.Arch End Semester Examinations, April/May 2019
Anna University, Chennai

Computer Science and Engineering
Third Semester
CS8303 – Database Management Systems
(Regulation 2012)

Time: 3 Hours Max. Marks: 100

Answer ALL Questions

Part A – (10 * 2 = 20 marks)

1. Is data management necessary? State the needs identified.
2. Give the representations of data.
3. Where do we use BCNF? Why?
4. Define Normalisation. Give it's benefits.
5. Which join is popularly used? Why?
6. What is an embedded SQL? Give example.
7. State the ACID properties.
8. What are locking protocols? How are they useful?
9. Compare and contrast indexing and hashing.
10. How do we visualize multidimensional data?

Part B – (5 * 16 = 80 marks)

11. i. What are data models? Explain with neat diagram. (8)

    ii. With a neat sketch elaborate database architecture and its working. (8)

12. a. Design an ER model for course registration system. Mention the constraints considered by you and explain the steps involved in arriving at the model. (16)

    (OR)

    b. State the steps followed for ER to Relational mapping. Perform and arrive at relational model for course registration system. (16)

13. a. Write a trigger to update count as students register for sports event. Explain the trigger in detail. (16)

(OR)

b. What are cursors? Write a cursor to identify the number of students who have obtained O grade in Mathematics. Explain in detail. (16)

14. a. State and explain the working of two phase commit protocol with a neat diagram. (16)

(OR)

b. Define concurrency. What is the need for concurrency? Explain the techniques used and the SQL support for concurrency. (16)

15. a. Explain query processing and optimization in detail with relevant examples. (16)

(OR)

b. i. Discuss in detail, Spatial and Temporal databases and its applications. (10)

ii. Write short notes on the use of mobile databases. (6)