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| **ST. JOSEPH’S COLLEGE (AUTONOMOUS), BANGALORE-27** |
| **M.Sc - II SEMESTER** |
| **SEMESTER EXAMINATION: APRIL 2018** |
| **CS 8315- Advanced Database Management System** |
|  |  |  |  |
| **Time- 2 1/2 hrs** |  | **Max Marks-70** |
|  |  |  |  |
| **This paper contains 2 printed pages.** |

**Answer any seven questions. 7\*10=70**

1. a) What is trivial and non trivial? Given relation R with attributes A, B, C, D and FDs A→BC,

 B→CD. Find the closure of all the attributes. 5 marks

 b)What is Normalization? Explain any two types with example.

 5 marks

2. a) Explain the strategies of Query Optimization. 5 marks

 b) Explain the basic operations in Relational Algebra with examples. 5 marks

3. a) Explain QBE with example to show Queries over Multiple relations. 5 marks

 b) Explain in detail the security in QBE. 5 marks

4. a) What are the properties of Transaction? 5 marks

 b) Explain the concept of simple transaction Model. 5 marks

5. a) Explain Interleaved transactions in concurrency with suitable

 example. 5 marks

 b) Describe the method of fragmentations in distributed system. 5 marks

 6. Explain Recovery in Distributed Databases. 10 marks

7. Explain the concept of Optimistic Concurrency control. 10 marks

8. What are the advantages of a distributed database management system over a

 centralized DBMS? 10 marks

9. Explain the frame work of Distributed Database in detail. 10 marks