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| **ST. JOSEPH’S COLLEGE (AUTONOMOUS), BANGALORE-27** | | | | | | |
| **M.Sc COMPUTER SCIENCE - II SEMESTER** | | | | | | |
| **SEMESTER EXAMINATION: APRIL 2018** | | | | | | |
| **CS 8118-Advanced Database Management Systems And Hadoop** | | | | | | |
|  |  |  |  |  |  |
| **Time- 2 1/2 hrs** | |  | **Max Marks-70** | | |
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| **This paper contains ONE printed page and ONE part** | | | | | | |
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**Answer any SEVEN questions (10X7 )**

1. What is Functional Dependency? Explain 2NF and 3NF of Normalization. (10)
2. Explain about query processing and Optimization in Relational Databases. (10)
3. Write about-

a)Time stamp based concurrency control. (5)

b)Different types of locks used in Concurrency Control. (5)

1. Explain the following recovery techniques in transactions with examples-

a)Shadow Paging. (5)

b)Deferred updates. (5)

1. Explain how OO concepts are used to extend traditional ER data modeling with suitable example. (10)

1. Compare ODB and RDB. (10)
2. Why is data replication is useful in Distributed Database and What are the types of

data replication? (10)

1. Explain the following type of parallelism
   1. inter query and intra query. (5)
   2. inter operation and intra operation. (5)
2. Explain HDFS architecture in Hadoop . (10)