Reg. No. \_\_\_\_\_\_\_\_\_\_\_\_\_

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**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **18CS3007** | **Duration :** | **3hrs** |
| **Sub. Name :** | **ADVANCED DATABASE MANAGEMENT SYSTEMS** | **Max. Marks :** | **100** |

**ANSWER ANY FIVE QUESTIONS (5 x 16 = 80 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Give a view on the information stored on individual tables, indexes and views in system catalog. | CO1 | 5 |
| b. | Comment on the techniques that are used to develop algorithms for each operator. | CO1 | 6 |
|  | c. | Discuss on the selection operator. | CO1 | 5 |
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| 2. | a. | Expound four important properties of transactions to maintain data in the face of concurrent access and system failures. | CO2 | 8 |
| b. | Give a detailed note on lock based concurrency control mechanisms. | CO2 | 8 |
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| 3. | a. | Evaluate the various techniques used for reducing the time for locks by the transactions. | CO3 | 10 |
| b. | List out and evaluate the choices in tuning the conceptual schema. | CO3 | 6 |
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| 4. | a. | Discuss the three distributed DBMS architectures in detail. | CO4 | 12 |
| b. | Evaluate the two approaches involved in updating distributed data. | CO4 | 4 |
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| 5. | a. | Give a detailed note on applications involved with spatial data. | CO5 | 6 |
| b. | Discuss the R trees in detail. | CO5 | 10 |
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| 6. | a. | How to estimate the cost of the plan? Explain. | CO1 | 6 |
| b. | Evaluate the two equivalences involved in the selection operation. | CO1 | 5 |
| c. | Brief on the alternative plan in the absence of a suitable index. | CO1 | 5 |
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| 7. | a. | How concurrency control in B+ trees can be done? Exemplify. | CO2 | 8 |
| b. | Describe the three phases of the ARIES recovery method in detail. | CO2 | 8 |
| **COMPULSORY QUESTION (1 x 20 = 20 Marks)** | | | | |
| 8. | a. | Explain the three objectives to be considered when designing a secure database application. | CO6 | 6 |
| b. | Discuss in detail the discretionary access control based on grant and revoke. | CO6 | 8 |
| c. | Discuss in detail the security for internet applications. | CO6 | 6 |