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



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

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| **Code :** | **17BI2009** | **Duration :** | **3hrs** |
| **Sub. Name :** | **DATABASE SYSTEMS AND ADMINISTRATION** | **Max. Marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. |  | Ilustrate and explain the overall architecture of Database Systems. | CO1 | 20 |
| **(OR)** | | | | |
| 2. |  | Sketch an E-R diagram for a biological database. Example should contain all components of the model and also discuss briefly about each component. | CO1 | 20 |
|  |  |  |  |  |
| 3. |  | Explain the fundamental operators and notations of relational algebra with suitable examples. | CO2 | 20 |
| **(OR)** | | | | |
| 4. | a. | Give examples and syntax for the following data manipulation query statements: i) Create table ii) Adding records iii) Update  iv) Delete. | CO3 | 15 |
| b. | Write a short note on transaction control language. | CO3 | 5 |
|  |  |  |  |  |
| 5. | a. | Briefly discuss about pitfalls in relational database design. | CO4 | 15 |
| b. | Draw a dependency diagram and explain second and third normal form. | CO4 | 5 |
| **(OR)** | | | | |
| 6. |  | Cite an instance and explain multivalued dependency and join dependency. | CO4 | 20 |
|  |  |  |  |  |
| 7. |  | Illustrate the basic steps in query processing and explain about each component. | CO4 | 20 |
| **(OR)** | | | | |
| 8. |  | Discuss in detail algorithms of selection operations. | CO5 | 20 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Give a short note on the privileges of database administrator. | CO6 | 5 |
| b. | Elaborate on duties and responsibilities of database administrator. | CO6 | 15 |