**MANAV RACHNA INTERNATIONALINSTITUTE OF RESEARCH AND STUDIES (DEEMED TO BE UNIVERSITY)**

Faculty of Engineering and Technology (FET)

**Department of Computer Science and Engineering**

**Tutorial/Assignment Sheet**

**(Unit-3:** **Query languages for Hadoop Eco System**

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**Subject Name: BDA Tutorial No.: 3**

**Subject Code: Class / Semester: VII**

**Max. Marks : 50M Time Allowed: 1 Week**

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| **1.**  **2.**  **3.**    4**.**    **5.**    **6.**    **7.**  8.  9.    10. | Jaql (Jakal) is a functional, declarative query language to process large data sets. Defend the functional and declarative features with adequate examples.  Where does jaql fit into the BIGDATA/BigInsight Ecosystem?  Mention three **core operators** of jaql ; filter, transform and aggregate by explaining their working with one example each at command line interface (CLI) mode.  What are the roles of the operators ‘.’ , ‘🡪’ , ‘=’ and ‘ :=’ ; cite one example each at CLI mode.  What is the difference between **eager loading** and **lazy loading** in jaql ?  i) Defend “jaql is a loosely typed language”.  ii) jaql variables can be used to store atomic values, ; write CLI examples for  each.  iii) jaql variables can be used to store Complex values that include arrays,  records ; write CLI examples for each.  iv) jaql variables can be used to store combinations of atomic and complex  values ; write CLI examples for the same.  Define an **adapter** in jaql and write CLI examples for any three.    Defend “jaql is extensible” by using User Defined Functions ( UDF) at CLI mode for add() and square ().  i) The **expand** Core Operator flattens nested arrays; write CLI examples for the same.  ii) The sort operator allows sorting of arrays ; write CLI examples for the same    **join** is an Aggregate operator ,which joins two or more arrays; write CLI examples for the same. | **COs:**  CO3  CO3  CO3  CO3  CO3  CO3  CO3  CO3  CO3  CO3 |

**Prepared By: Approved By:**

**Dr. Tapas Kumar**

**Course Coordinator (Professor &HOD-CSE)**