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| **Course objectives** | **BTL Level** | **DL** | **No of questions \* Marks** | **Questions \* Marks** | **Weightage** | **Resource** |
| **Co1-**Understand fundamental concepts of Big Data and  its technologies | L2 | 2 | 10 | 5\*2 | 0.1 | Introduction to Big Data Analytics and NoSQL (slides) |
| **Co2-** Apply concepts of MapReduce framework for optimization. | L3 | 2 | 20 | 2\*10  (Hadoop Theory - 10 + Mapreduce Programming - 10) | 0.2 | Hadoop and MapReduce (slides + Lab manual) |
| **CO 3**-Analyze appropriate NoSQL database techniques for  storing and processing large volumes of structured  and unstructured data. | L4 | 3 | 30 | 2\*10(1 Mongo + 1 Cassandra **Queries** )  2\*5 (1 Mongo + 1 Cassandra **Theory**) | 0.3 | Mongo and Cassandra (slides + Lab manual) |
| **Co4-** Apply data analytics solutions using Hadoop ecosystems | L3 | 3 | 30 | 2\*10(1 Hive + 1 Pig **Queries** )  2\*5 (1 Hive + 1 Pig **Theory** | 0.3 | Hive and Pig(slides + Lab manual) |
| **Co5-**Explore modern reporting tools for Machine learning | L4 | 2 | 10 | 1\*10 | 0.1 | Linear Regression  (self study) |