USN | | | | | | | | | | 21CS71

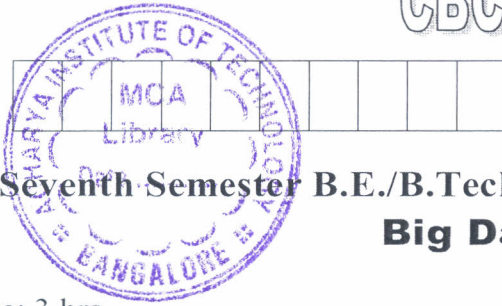## Seventh Semester B.E./B.Tech. Degree Examination, June/July 2025
Big Data Analytics

Time: 3 hrs.   Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. Define Big data. Explain big Data characteristics.   **(10 Marks)**

   b. Explain the classification of data in Big data.   **(10 Marks)**

OR

2 a. Define Data, Web Data. Illustrate by considering example of E-commerce, how big data is used.   **(10 Marks)**

   b. With a neat diagram, explain the function of each of the five layers in big data architecture.   **(10 Marks)**

Module-2

3 a. With a neat diagram, explain Hadoop main components and ecosystem.   **(10 Marks)**

   b. Explain the features of Hadoop HDFS with the functions of Name node and Data node.   **(10 Marks)**

OR

4 a. Explain HDFS block replicator and HDFS safe mode.   **(10 Marks)**

   b. Discuss the Apache Sqoop import and export methods with a neat diagram.   **(10 Marks)**

Module-3

5 a. Explain the features of Big Table, RC, ORC and parquet data stores.   **(10 Marks)**

   b. With example explain Key-values store.   **(10 Marks)**

OR

6 a. Explain NOSQL Data store and its characteristics.   **(10 Marks)**

   b. Describe the features of MongoDB and its industrial application.   **(10 Marks)**

Module-4

7 a. Describe the Map task, Reduce tasks and Map reduce execution process.   **(10 Marks)**

   b. Describe Hive architecture and features.   **(10 Marks)**

OR

8 a. Explain the architecture, feature and application of PIG. (10 Marks)

b. Illustrate by considering an example the working of the map reduce programming model. (10 Marks)

Module-5

9 a. How does Regression analysis predict the value of dependent variable incase of linear regression. (10 Marks)

b. Explain with an example and algorithm the working principle of Apriori process for adopting the subset of frequent item set. (10 Marks)

OR

10 a. Define the term web mining. Discuss the broad classification of web mining and their application. (10 Marks)

b. Define the term social network. Explain social network as graph with Centralities, Ranking and Anomaly detection. (10 Marks)

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