

# CBCS SCHEME

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## Eighth Semester B.Tech. Degree Examination, June/July 2024 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. With a neat diagram explain evolution of big data and their characteristics. (10 Marks)
- b. Define scalability and its types along with examples. (10 Marks)

OR

- 2 a. With a neat diagram, explain the big data architecture design. (10 Marks)
- b. How does Berkeley Data Analytics stack help in analytics tasks? (10 Marks)

### Module-2

- 3 a. With a neat diagram, explain core components of Hadoop and features of Hadoop. (12 Marks)
- b. Explain the concepts of the HDFS block replication with an example. (08 Marks)

OR

- 4 a. What is APACHE Flume? Describe the features components and working of apache flume. (10 Marks)
- b. Demonstrate any six HBase commands with output. (10 Marks)

### Module-3

- 5 a. Explain about NOSQL data store and its characteristics. (10 Marks)
- b. With example, explain key-value store. (10 Marks)

OR

- 6 a. Describe the features of MongoDB and its industrial application. (10 Marks)
- b. i) Explain different components of Cassandra. (05 Marks)  
ii) Describe different CQL commands and their functionalities. (05 Marks)

### Module-4

- 7 a. Describe the Map tasks, Reduce tasks and MapReduce Execution process. (10 Marks)
- b. With a neat diagram, describe Hive integration and work flow steps. (10 Marks)

OR

- 8 a. Demonstrate the pig architecture for scripts data flow and processing. (10 Marks)
- b. Differentiate between Pig and MapReduce, give industrial applications for each. (10 Marks)

### Module-5

- 9 a. Explain the simple linear regression analysis. (10 Marks)
- b. Explain with an example Apriori algorithm to evaluate candidate key. (10 Marks)

OR

- 10 a. With a neat diagram, write the steps in K-means clustering. (10 Marks)
- b. Explain the purpose of web usage analytics and the significance of web graphs. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.