



# CBCS SCHEME

21CS71

Seventh Semester B.E./B.Tech Degree Examination, Dec.2024/Jan.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. Discuss the evolution of Big Data. (06 Marks)
- b. Explain the characteristics of Big Data. (04 Marks)
- c. Explain Data Architecture Design, with a neat diagram. (10 Marks)

OR

- 2 a. Explain Analytics Scalability to Big Data and Massive parallel processing platforms. (12 Marks)
- b. Explain Big Data Analytics applications with one case study. (08 Marks)

### Module-2

- 3 a. List and explain the core components of Hadoop. (10 Marks)
- b. Explain Hadoop Distributed File System. (10 Marks)

OR

- 4 a. Define MapReduce Framework and its functions. (06 Marks)
- b. Explain steps on the request to MapReduce and the types of process in MapReduce. (10 Marks)
- c. Explain in brief on Flume Hadoop Tool. (04 Marks)

### Module-3

- 5 a. Explain about No SQL datastore and its characteristics. (10 Marks)
- b. Describe the principle of working of the CAP theorem. (10 Marks)

OR

- 6 a. Demonstrate the working of key-value store with an example. (10 Marks)
- b. Describe the features of MongoDB, and its industrial application. (10 Marks)

### Module-4

- 7 a. Explain the process in MapReduce when client submitting a job, with a neat diagram. (10 Marks)
- b. Explain Hive Integration and workflow steps involved with a diagram. (10 Marks)

OR

- 8 a. Using HiveQL for the following :  
i) Create a table with partition  
ii) Add, rename and drop a partition to a table. (10 Marks)  
b. What is PIG in BigData? Explain the feature of PIG. (10 Marks)

**Module-5**

- 9 a. Explain linear and non-linear relationship with essential graphs in machine learning. (10 Marks)  
b. Write the block diagram of text mining process and explain its phases. (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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