

CBCS SCHEME

20MCA352



Third Semester MCA Degree Examination, Dec.2023/Jan.2024

Big Data Analytics

Max. Marks: 100

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

Module-1

- 1 a. Describe the working of analytical process model with a neat diagram. (10 Marks)
- b. Explain the different types of data sources and data elements. (10 Marks)

OR

- 2 a. Explain the two important steps in dealing with outliers. (10 Marks)
- b. List and explain the different example applications of analytics. (10 Marks)

Module-2

- 3 a. Define Hadoop. Explain the feature and critical components of Hadoop. (10 Marks)
- b. What is crowd sourcing analytics? Why it is needed? (10 Marks)

OR

- 4 a. What is predictive analytics? Why are they required? Discuss the leading trends in predictive analytics. (10 Marks)
- b. Explain how Mobile Business Intelligence is going mainstream. (10 Marks)

Module-3

- 5 a. Compare RDBMS technology with MapReduce. (10 Marks)
- b. Explain the various open source technologies of Hadoop ecosystem. (10 Marks)

OR

- 6 a. Discuss the difficulties of implementing storage and analysis support for Big data. (10 Marks)
- b. Write short notes on : (10 Marks)
(i) Grid computing (ii) Volunteer computing

Module-4

- 7 a. Define memory block in HDFS. Explain block report, replication factor and rack awareness with respect to data node. (12 Marks)
- b. Discuss any four HDFS commands with examples each. (08 Marks)

OR

- 8 a. Explain the architectural changes required while replacing active namenode with standby namenode. (10 Marks)
- b. Explain the anatomy of reading data from a file in HDFS with the help of a diagram. (10 Marks)

Module-5

- 9 a. What is MapReduce? Sketch a neat diagram and explain the logical data flow in MapReduce. (10 Marks)
- b. Briefly explain Hadoop streaming. (10 Marks)

OR

- 10 a. Write a Java MapReduce code to find maximum temperature from the weather data set. (10 Marks)
- b. How does a MapReduce model works with a single reduce task? Explain with a neat diagram. (10 Marks)

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.

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