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P.E.S. College of Engineering, Mandya - 571 401
(An Autonomous Institution affiliated to VTU, Belagavi)
First Semester, M. Tech - Computer Science and Engineering (MCSE)
Semester End Examination; Jan. -2020
Managing Big Data

Time: 3 hrs   Max. Marks: 100

*Note: Answer **FIVE** full questions, selecting **ONE** full question from each unit.*

UNIT - I

1 a.	Briefly explain the elements of Big Data.	8
b.	Explain with an example how big data can be used to detect fraudulent activities?	12
2 a.	Explain Hadoop ecosystem in detail.	10
b.	Explain features of HDFS, working of Map Reduce and Hbase architecture in detail.	10

UNIT - II

3 a.	With Map Reduce framework, explain feature of Map Reduce in detail.	10
b.	Explain different techniques to optimize Map Reduce jobs.	10
4 a.	Explain the Map Reduce working algorithm in detail.	10
b.	Explain any three uses of Map Reduce.	10

UNIT - III

5 a.	Explain characteristics of NoSQL with neat diagram and also explain interaction between the layers in NoSQL with neat diagram.	10
b.	List and explain various types of NoSQL data models.	10
6 a.	Define CAP theorem and also explain ACID property of database.	10
b.	Explain materialized views and Sharding of database.	10

UNIT - IV

7 a.	Compare reporting and analysis and explain in detail.	10
b.	Explain analytic process in detail.	10
8 a.	List and explain various types of analytics.	10
b.	What are the points to be considered during analysis?	10

UNIT - V

9 a.	What are the various types of data visualization? Explain in detail.	10
b.	What are the applications of data visualization? Explain in detail.	10
10 a.	List and explain various tools used in data visualization.	10
b.	Write short on Tableau products used in big data visualization.	10

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