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P.E.S. College of Engineering, Mandya - 571 401
(An Autonomous Institution affiliated to VTU, Belagavi)
Second Semester, M. Tech - Computer Engineering (MCEN)
Semester End Examination; June - 2017
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. Define big data. Differentiate big data with relational data base management system with relevant examples. — 10

   b. Briefly discuss the various features of big data in medicine and advertising with suitable examples. — 10

2 a. Write short notes on :

   i) Mobile Business Intelligence

   ii) Crowd Sourcing Analytics. — 10

   b. Discuss the concept of unstructured data and credit risk management with suitable examples. — 10

UNIT - II

3 a. Define NOSQL. Explain the concept of aggregate data model with a suitable example. — 10

   b. Differentiate between document data models and distribution models with suitable examples. — 10

4 a. Explain the concept of partitioning and combining in relation to Map-Reduce with a suitable example. — 10

   b. Discuss the process of composing Map-Reduce calculations in detail with a suitable example. — 10

UNIT - III

5 a. Discuss in detail the design of Hadoop Distributed File System (HDFS). — 10

   b. Describe the concept of reading data using the file system API in HDFS. — 10

6 a. Explain the anatomy of a file read and file write in HDFS. — 10

   b. Discuss the concept of network distance in Hadoop with different scenarios. — 10

UNIT - IV

7 a. Discuss in detail the execution sequence of Map-Reduce programming model with a suitable sketches for each. — 10

   b. Discuss the various failures that occur during a Map-Reduce application execution. — 10

8 a. Explain the working of YARN in detail with appropriate sketches. — 10

   b. Discuss the various input and output formats supported by Map-Reduce with suitable examples. — 10

UNIT - V

9 a. Discuss the data model and implementations of HBASE with suitable examples. 10

   b. With an example of your choice write a Pig Latin Script to demonstrate an application of big data. 10

10 a. Discuss the Cassandra data model with suitable examples. Briefly discuss its integration with Hadoop. 10

   b. Define Hive. Discuss the various data types and file formats with suitable example. 10

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