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## P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belgaum)

Second Semester, M. Tech - Computer Science and Engineering (MCSE)

Semester End Examination; June - 2016

### 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. Discuss the major trends in big data with suitable examples. 10
- b. Briefly explain the concept of grid computing and crowd sourcing analytics with example. 10
- 2 a. Discuss the Big data and Hadoop open source technologies in detail. 10
- b. Write short notes on : 10
  - (i) Big data and algorithmic trading
  - (ii) Credit Risk management.

#### UNIT - II

- 3 a. Differentiate between aggregate data models and graph databases with suitable examples. 10
- b. Discuss in detail and analyse the distribution models with suitable examples. 10
- 4 a. Describe the process of composing Map-reduce calculations with a suitable example. 10
- b. Define NOSQL. Explain its importance in today's industry ecosystem. 10

#### UNIT - III

- 5 a. Discuss the concept of Hadoop streaming with a suitable script of your choice. 10
- b. Write a code snippet in Java for displaying files from a Hadoop file system on standard output using a URL stream handler. 5
- c. Demonstrate with java program for copying a local file to a Hadoop file system. 5
- 6 a. Discuss the concept of Replica placement in HDFS with suitable sketches. 10
- b. Explain any five types of Hadoop files systems. 10

#### UNIT - IV

- 7 a. Discuss in detail how the unit tests with Map reduce unit is done. 10
- b. Discuss the concept of Shuffle and sort of Map reduce programming model with suitable sketches. 10
- 8 a. Discuss in detail the concept of Scheduling in YARN. 10
- b. Discuss the Map Reduce Work flows with suitable examples. 10

#### UNIT - V

- 9 a. Discuss the Cassandra data model with suitable examples. 10
- b. Define Pig. Briefly explain the Pig Data model with suitable examples. 10
- 10 a. Briefly explain Hbase clients with a suitable example. 10
- b. With an example of your choice Discuss the various hive QL queries. 10

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