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

(An Autonomous Institution affiliated to VTU, Belgaum)

Seventh Semester, B.E. - Information Science and Engineering

Semester End Examination; Dec - 2016/Jan - 2017

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. Describe the big data uses. Compare big data with other systems. 10
- b. Explain the role of big data in credit risk management and advertising. 10
- 2 a. Explain Crowd sourcing analytics and inter and trans firewall analytics. 10
- b. Explain Big data and Hadoop open source technologies. 10

UNIT - II

- 3 a. Discuss the data models relationships and databases types. 10
- b. Write a brief note on composing Map-Reduce calculations. 10
- 4 a. Explain the aggregate data model with an example. 10
- b. Explain graph database and schemaless database with an example. 10

UNIT - III

- 5 a. What is data format? Illustrate with an example how we can analyze data with Hadoop? 10
- b. Define Hadoop. Write C++ program to find maximum wind speed. 10
- 6 a. Justify the need of java interface. 10
- b. List out and explain the advantages of HDFS. 5
- c. Discuss Avro file based data structures. 5

UNIT - IV

- 7 a. Explain unit tests and MR-unit with example. 10
- b. Discuss the failures in classic Map-Reduce and YARN? 10
- 8 a. Discuss the input and output format in Map-Reduce. 10
- b. Explain Classic Map-Reduce and YARN with example. 10

UNIT - V

- 9 a. Explain Hbase and their data model and implementations. 10
- b. Explain in detail about Hive data manipulation, queries, data, definition and data types. 10
- 10 a. Explain Hive data types and file formats. 5
- b. Explain pig Latin script and Grunt shell. 5
- c. Describe Hive QL data definition in detail. 5
- d. Explain Cassandra architecture and its data model in detail. 5