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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

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|------|---|----|
| 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

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|------|---|----|
| 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

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|------|--|----|
| 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

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|------|--|----|
| 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

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|-------|---|----|
| 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 |