



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

(An Autonomous Institution affiliated to VTU, Belagavi)

Fifth Semester, Master of Computer Applications (MCA)

Semester End Examination; Dec. - 2019

Big Data and Analytics

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. | Describe with neat diagram classification of digital data. | 10 |
| | b. Explain characteristics of Data. | 6 |
| | c. Give reason why is an email placed in the “unstructured category”? | 4 |
| 2 a. | Describe traditional business intelligence. | 6 |
| | b. Differentiate a typical data warehouse environment and typical Hadoop environment. | 10 |
| | c. Can the same visualization tool that we run over conventional data warehouse, be used in big data environment? | 4 |

UNIT - II

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|------|-------------------------------------------------------------------------------------|----|
| 3 a. | Describe classification of analytics. | 10 |
| | b. Discuss greatest challenges that prevent business from capitalizing on Big data. | 10 |
| 4 a. | Discuss the terminology used in Big data environment. | 10 |
| | b. Explain CAP theorem. | 10 |

UNIT - III

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|------|-------------------------------------------------------------------|----|
| 5 a. | Describe the challenges in Distributed computing. | 10 |
| | b. Explain managing resources and applications using Hadoop YARN. | 10 |
| 6 a. | Describe Hadoop distributed file system (HDFS). | 10 |
| | b. Explain the terms used in RDBMS and MongoDB. | 6 |
| | c. List the data types in MongoDB. | 4 |

UNIT - IV

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|------|-------------------------------------------------|----|
| 7 a. | Describe the features of Cassandra. | 10 |
| | b. Explain with neat diagram HIVE architecture. | 10 |
| 8 a. | Explain with example CQL Data types. | 4 |
| | b. Describe HIVE file format. | 10 |
| | c. Explain UDF in HIVE. | 6 |

UNIT - V

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|-------|-------------------------------------------------------------------------------------------------------------------|----|
| 9 a. | Explain the main components and philosophy of PIG. | 10 |
| | b. Describe the steps to connect to MongoDB database using jaspersoft . | 10 |
| 10 a. | Write the purpose and example of the following: | 10 |
| | i) FILTER ii) DISTINCT iii) LIMIT iv) SAMPLE | |
| | b. Briefly explain jaspersoft studio uses Cassandra query language to retrieve data from Cassandra NOSQL database | 10 |