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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; Jan. / Feb. - 2021

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. | Discuss different types of Data. | 4 |
| | b. Discuss in brief the evolution of Big Data. | 6 |
| | c. Discuss advantages of Big Data and give its applications. | 10 |
| 2 a. | Discuss features of Map Reduce and HBase. | 10 |
| | b. Discuss HDFS architecture. | 10 |

UNIT - II

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| 3 a. | Discuss the techniques to optimize Map Reduce job. | 10 |
| | b. With a help of neat diagram, discuss working of Map Reduce. | 10 |
| 4 a. | Discuss the major principal features of Map Reduce. | 10 |
| | b. Explain the characteristics of HBase and give the steps for installing of HBase. | 10 |

UNIT - III

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| 5 a. | Explain the different characteristics of NoSQL and discuss the different interaction layers in it. | 10 |
| | b. Discuss key value data model and graph databases. | 10 |
| 6 a. | Discuss the different aspects of CAP theorem and explain the concept of sharding. | 10 |
| | b. Explain in detail, the concept of Map Reduce Partitioning and its Calculations. | 10 |

UNIT - IV

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| 7 a. | Explain Reporting and Analytics. Compare Reporting with Analysis. | 10 |
| | b. Explain and compare basic analytics and advanced analytics. | 10 |
| 8 a. | Discuss the different points to consider during analysis. | 10 |
| | b. Explain the difficulties in developing an analytical team and also give the skills which are required for an analyst. | 10 |

UNIT - V

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| 9 a. | Discuss the types of Data Visualization. | 10 |
| | b. Discuss the tools used for Data Visualization. | 10 |
| 10 a. | Explain applications of Data Visualization. | 10 |
| | b. Describe the analytical technique used in Big Data Visualization. | 10 |

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