

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)

**B.Tech. IV Year I Semester Regular & Supplementary Examinations October/November-2025**  
**BIG DATA ESSENTIALS**  
(Common to CAI & CCC)

**Time: 3 Hours****Max. Marks: 60**

(Answer all Five Units 5 x 12 = 60 Marks)

**UNIT-I**

- |   |   |  |     |    |    |
|---|---|--|-----|----|----|
| 1 | a | Examine the different types of digital data with examples.                     | CO1 | L4 | 6M |
|   | b | Summarize Big Data in terms of three dimensions, volume, variety and velocity. | CO1 | L2 | 6M |

**OR**

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|---|--|---|-----|----|-----|
| 2 |  | Discuss about the Analysis of data through Unix tools and Hadoop. | CO1 | L2 | 12M |
|---|--|---|-----|----|-----|

**UNIT-II**

- |   |  |  |     |    |     |
|---|--|--|-----|----|-----|
| 3 |  | What are the advantages of Hadoop? Explain Hadoop Architecture and its Components with neat diagram. | CO2 | L1 | 12M |
|---|--|--|-----|----|-----|

**OR**

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|---|--|--|-----|----|-----|
| 4 |  | Elaborate the AVRO file format with diagram. | CO2 | L6 | 12M |
|---|--|--|-----|----|-----|

**UNIT-III**

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|---|--|---|-----|----|-----|
| 5 |  | Sketch neatly and Explain MapReduce Architecture in detail. | CO3 | L3 | 12M |
|---|--|---|-----|----|-----|

**OR**

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|---|------|---|-----|----|-----|
| 6 |      | Discriminate the below features in MapReduce. | CO3 | L4 | 12M |
|   | i)   | Counters                                      |     |    |     |
|   | ii)  | Sorting                                       |     |    |     |
|   | iii) | Joins   |     |    |     |

**UNIT-IV**

- |   |  |  |     |    |     |
|---|--|--|-----|----|-----|
| 7 |  | What is Pig? How to Install and execute PIG on Hadoop Cluster. | CO4 | L2 | 12M |
|---|--|--|-----|----|-----|

**OR**

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|---|--|--|-----|----|-----|
| 8 |  | Develop Pig Latin Schemas and Functions. | CO4 | L3 | 12M |
|---|--|--|-----|----|-----|

**UNIT-V**

- |   |  |                                     |     |    |     |
|---|--|-------------------------------------|-----|----|-----|
| 9 |  | Illustrate Hive table with example. | CO5 | L3 | 12M |
|---|--|-------------------------------------|-----|----|-----|

**OR**

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|----|---|---|-----|----|----|
| 10 | a | Explain about IBM Big SQL.                      | CO5 | L3 | 6M |
|    | b | Assess how HBase is implemented at Streamy.com. | CO5 | L4 | 6M |

**\*\*\* END \*\*\***