**MODEL PAPER**

**IV B. TECH I SEMESTER**

**\_\_\_\_\_\_ SUBJECT FULL FORM \_\_\_\_\_\_\_**

**(\_\_\_\_\_\_ BRANCH\_\_\_\_\_\_\_)**

**Time : 3 Hours Max. Marks : 70**

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**Note :** Answer **ONE** question from each unit **(5 × 14 = 70 Marks)**

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| UNIT-I | | |  | CO | BL |
| 1. | a) | Define Big Data. Explain the Evolution of Big Data and their characteristics . | [7M] | CO1 | 2 |
| b) | Discuss Big Data in Healthcare,E-Commerce & Medicine | [7M] | CO1 | 2 |
| (OR) | | |  |  |  |
| 2. | a) | Define Data,Web data, Big data.Also explain Structured ,Semi Structured and unstructured data. | [7M] | CO1 | 2 |
| b) | Elaborate on the importance of big data analytics in driving business success and innovation. | [7M] | CO1 | 4 |
| UNIT-II | | |  |  |  |
| 3. | a) | Explain the concept of the Hadoop Distributed File System (HDFS). How does it manage data storage in a Hadoop cluster? | [7M] | CO2 | 2 |
| b) | Compare and contrast RDBMS and Hadoop in terms of architecture and suitability for handling big data. | [7M] | CO2 | 4 |
| (OR) | | |  |  |  |
| 4. | a) | Illustrate YARN based execution model and its functions With a neat diagram | [7M] | CO2 | 3 |
| b) | What is Hadoop Ecosystem? Discuss various components of Hadoop Ecosystem. | [7M] | CO2 | 2 |
| UNIT-III | | |  |  |  |
| 5. | a) | Explain the role of a Mapper in the MapReduce framework. How does it process input data? | [7M] | C03 | 2 |
| b) | Explain the purpose of Shuffling and Sorting phase in the Reducer in Map Reduce programming. | [7M] | CO3 | 2 |
| (OR) | | |  |  |  |
| 6. | a) | Explain “Map Phase” and “Combiner Phase” in MapReduce. | [7M] | CO3 | 2 |
| b) | Write an application to find the maximum temperature, using a combiner function for efficiency? | [7M] | CO3 | 6 |
| UNIT-IV | | |  |  |  |
| 7. | a) | Explain the following in Pig Latin:   1. Tuple ii) Map iii) Filter iv) Distinct | [7M] | CO4 | 2 |
| b) | Explain the key design principles of Pig Latin. | [7M] | CO4 | 2 |
| (OR) | | |  |  |  |
| 8. | a) | Write a short note on Apache Pig. Enlist applications of Apache  Pig. | [7M] | CO4 | 1 |
| b) | Discuss in brief about running a pig script in local and distributed mode. | [7M] | CO4 | 2 |
| UNIT-V | | |  |  |  |
| 9. | a) | With a neat diagram explain the key components of Hive architecture. | [7M] | CO5 | 2 |
| b) | Write a Hive UDF for stripping characters from the ends of strings. | [7M] | CO5 | 3 |
| (OR) | | |  |  |  |
| 10. | a) | Explain Hive Data types | [7M] | CO5 | 2 |
| b) | Explain the creating, dropping and altering databases using Apache Hive. | [7M] | CO5 | 2 |

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