III B. TECH II SEMESTER REGULAR EXAMINATIONS APRIL - 2023
BIG DATA ANALYTICS
(MECHANICAL ENGINEERING)

Time: 3 hours   Max. Marks: 70

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

1. a) What are the different modes of Hadoop installation? Explain each mode briefly. [8M]

    b) What are the three V's of Big data? Explain each of their characteristics pertaining to big data applications. [6M]

(OR)

2. a) Distinguish the difference between HDFS and GFS. [4M]

    b) "NameNode is the main and heartbeat node of Hdfs." Justify the given statement with a suitable example. [10M]

UNIT-II

3. a) What is API ? Explain the types of the API in MapReduce frame work (Old and New)? [7M]

    b) List out the Benefits of Hadoop MapReduce. [7M]

(OR)

4. a) Describe the architecture of MapReduce along with its components with a neat diagram. [10M]

    b) Briefly explain any two applications of Hadoop MapReduce [4M]

UNIT-III

5. a) Distinguish Writable and Writable Comparable interface in Hadoop? [10M]

    b) List out all the Primitive Writable classes with their Hierarchy. [4M]

(OR)

6. a) How to create a custom writable for Hadoop? Explain how a custom Writable works which is used to store both gender and login information to calculate login statistics based on gender. [10M]

    b) Define null writable in Hadoop. Mention two of its advantages. [4M]

UNIT-IV

7. a) Explain in detail the step wise process of Installation of Apache Pig. [10M]

    b) What is the running mode of Pig? What are the Latin pig statements used to read data from the HDFS file system and to output. [4M]

(OR)

8. a) Explain the architecture of Pig in big data analysis with a neat [12M] diagram.

   b) Define Pig Latin Script with an example.   [2M]

UNIT-V

9. a) Illustrate in detail Data Manipulation Language commands in Hive.   [12M]

   b) Can we install Hive without Hadoop? Justify with Hive features.   [2M]

(OR)

10. a) What are the various components of Hive architecture? Explain [10M] each one of them in detail with a neat diagram.

    b) List out the limitations of Hive by comparing with Apache Pig.   [4M]

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