

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**MCA INTEGRATED– SEMESTER VIII- EXAMINATION –SUMMER-2022**

**Subject Code: 2688601****Date: 31/05/2022****Subject Name: Big Data Analytics****Time: 10:30 AM to 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a)** 1. What is Big Data? Explain its Four Vs. **04**  
 2. What is Big Data Analytics? Explain BDA Life Cycle. **03**
- (b)** What is Hadoop? Explain Data Node, Name Node, Secondary Name Node, Job Tracker and Task Tracker. **07**
- Q.2 (a)** What is HDFS? Write HDFS Command for Following Operation. **07**
- a. Create a directory in Hadoop dfs.
  - b. Move the directory from hdfs to local machine.
  - c. List all the directory and sub directory and file of Hadoop dfs.
  - d. Change permission of a file from read to write.
  - e. Counts the number of files, directories, and bytes under the paths of root
- (b)** What is MapReduce? Write a Mapper and Reducer function for word count **07**
- OR**
- (b)** Difference Between
1. NoSQL vs. SQL Vs. NewSQL **04**
  2. Hadoop Vs. RDBMS **03**
- Q.3 (a)** What is HIVE? Explain Hive Architecture with figure. **07**
- (b)** List out and give an overview of Hadoop ecosystems. **07**
- OR**
- Q.3 (a)** What is HBase? Explain how data is stored in HBase using appropriate example. **07**
- (b)** What is ZooKeeper? Explain how it helps in monitoring a cluster. **07**
- Q.4 (a)** What is Spark? Explain RDD in details **07**
- (b)** What is NoSQL? Explain Type of NoSQL Databases. **07**
- OR**
- Q.4 (a)** What is NoSQL? Explain the advantages of NoSQL **07**
- (b)** List out all RDD operations. Explain Transformation operation in detail. **07**
- Q.5 (a)** What is MongoDB? Explain how MongoDB achieves horizontal scaling **07**
- (b)** Explain HBase architecture in detail **07**
- OR**
- Q.5 (a)** Explain MongoDB data types with an example. **07**
- (b)** Explain execution modes and data types in Pig. **07**

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