

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII(NEW) EXAMINATION – SUMMER 2019****Subject Code:2171607****Date:10/05/2019****Subject Name:Big Data Analytics****Time:02:30 PM TO 05:00 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) What is Big Data? Explain characteristics of Big Data. **03**  
 (b) Explain Five P's of Big Data in brief. **04**  
 (c) Explain Hadoop components with diagram. **07**
- Q.2** (a) Define the following terms for Big Data: **03**  
 i. Structured data  
 ii. Semi structured data  
 iii. Unstructured data.  
 (b) Describe Map and Reduce phases of Map Reduce. **04**  
 (c) Define HDFS. Explain HDFS Architecture with diagram. **07**
- OR**
- (c) Explain storage mechanism of HBase with an example. List out the features of HBase **07**
- Q.3** (a) Explain CREATE TABLE statement of HIVE with an example. **03**  
 (b) Write the use and syntax of following HDFS commands: **04**  
 i. mkdir      ii. chown      iv. put      iv. copyToLocal  
 (c) What is RDD? Explain RDD operations in detail. **07**
- OR**
- Q.3** (a) Discuss the functions of Job Tracker and Task Tracker. **03**  
 (b) Explain Four V's of Big Data. **04**  
 (c) Explain Apache Pig architecture and its components with diagram. **07**
- Q.4** (a) What is Zookeeper? Write functions of it. **03**  
 (b) Explain the components of SPARK. **04**  
 (c) Discuss big data applications for smart city project. **07**
- OR**
- Q.4** (a) Write down the features of HDFS. **03**  
 (b) List out the differences between Map Reduce and SPARK. **04**  
 (c) List out the features of NoSQL. Explain types of NoSQL databases in brief. **07**
- Q.5** (a) Define: Term Frequency and Inverse Document Frequency. **03**  
 (b) How RDBMS is differ from HBase? **04**  
 (c) Explain the architecture of HIVE. List out the features of HIVE. **07**
- OR**
- Q.5** (a) Explain find() method of MongoDB with an example. **03**  
 (b) Discuss Machine Learning with MLlib in SPARK. **04**  
 (c) Explain CRUD operations of MongoDB. **07**

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