

GUJARAT TECHNOLOGICAL UNIVERSITY**ME – SEMESTER –I-(New) EXAMINATION – SUMMER 2019****Subject Code: 3712313****Date: 13/05/2019****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) i) Define Big data and analytics. List and Explain categories of Big Data. **07**
 ii) List out 4 V's Properties and explain with example.
- (b) Write a short note on NoSQL database models. List the differences between NoSQL and RDMS. **07**
- Q.2** (a) What is Index? How can apply index on fields in MongoDB? Also Explain to view the status and description of applied Index with example. **07**
- (b) i) Write activities of JobTracker and TaskTracker in MapReduce. **07**
 ii) State use of NameNode and DataNode.
- OR**
- (b) List out the applications of Big data and explain them in details. **07**
- Q.3** (a) What is Apache Pig? Write features of it. Why Apache Pig Latin is used? **07**
- (b) Draw Architecture of CASSANDRA and explain each component in detail. **07**
- OR**
- Q.3** (a) Describe features of Cassandra and its tunable consistency. **07**
- (b) Write a short note on execution of Apache Pig along with sample Apache Pig Latin script using Grunt Shell. **07**
- Q.4** (a) Define HDFS. Discuss the HDFS architecture and HDFS commands in brief. **07**
- (b) Write and explain JDBC code for various DDL and DML statements for Hive. **07**
- OR**
- Q.4** (a) Explain working of Hive with proper steps and diagram. **07**
- (b) Explain Map-Reduce framework in detail. Draw the architectural diagram for Physical Organization of Computer Nodes. **07**
- Q.5** (a) How does HDFS ensure data Integrity in a Hadoop Cluster? **07**
- (b) What are limitations of Hadoop? What are features and applications of Hbase? **07**
 Compare Hbase with RDBMS and HDFS.
- OR**
- Q.5** (a) i) How Pig is useful in Hadoop? Explain Apache Pig Data Model. **07**
 ii) List and explain execution mode of Pig
- (b) Explain various operators and functions in Hive. **07**
