

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER– VII (New) EXAMINATION – WINTER 2019

Subject Code: 2171607

Date: 23/11/2019

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.

		MARKS
Q.1	(a) Define Big Data. Enlist its importance over traditional database system.	03
	(b) List out 4 V's and Explain in detail.	04
	(c) List out the applications of Big data and explain them in details.	07
Q.2	(a) Implement Join operation using Hive.	03
	(b) List out key elements of Ingress and Egress and explain them in detail.	04
	(c) Define HDFS. Discuss the HDFS architecture and HDFS commands in brief.	07
	OR	
	(c) Write a short note on NoSQL databases. List the differences between NoSQL and relational databases.	07
Q.3	(a) What is Zookeeper? List the benefits of it.	03
	(b) Explain Aggregation and Indexing for MongoDB.	04
	(c) What are the components of Spark? Also state the features of Spark.	07
	OR	
Q.3	(a) Explain in detail: Input and Output of MapReduce.	03
	(b) Write a short note on Pig.	04
	(c) Explain CRUD operations in MongoDB.	07
Q.4	(a) Explain any three HiveQL DDL command with its syntax and example.	03
	(b) What is HBase? List out and explain the basic concepts of HBase in detail.	04
	(c) Explain Replication and scaling feature of MongoDB.	07
	OR	
Q.4	(a) Explain the following commands of HDFS: i) copyFromLocal ii) setrep iii) checksum	03
	(b) As per your point of view, How Big data analytics can be useful in development of smart cities?	04
	(c) Explain working of Hive with proper steps and diagram.	07
Q.5	(a) Explain Metastore in Hive.	03
	(b) Differentiate: Apache pig Vs Map Reduce.	04
	(c) What are the problems related to Map Reduce data storage? How Apache Spark solves it using Resilient Distributed Dataset? Explain RDDs in detail.	07
	OR	
Q.5	(a) Write a MapReduce code for Word Count.	03
	(b) "Moving Computation is Cheaper than Moving Data", Justify the sentence.	04
	(c) Explain Map-Reduce framework in detail. Draw the architectural diagram for Physical Organization of Computer Nodes.	07
