

Enrolment No./Seat No _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-VII (NEW) EXAMINATION – WINTER 2024

Subject Code:2171607

Date:04-12-2024

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.
4. Simple and non-programmable scientific calculators are allowed.

		Marks
Q.1	(a) List various use cases of Big Data. Also enlist its importance over traditional database system.	03
	(b) Define: Big Data, Heartbeat, Volume, and Velocity	04
	(c) Draw different components of Hadoop with diagram. Explain each in details.	07
Q.2	(a) What is HDFS? List out different HDFS Commands.	03
	(b) Explain the working of MapReduce in short.	04
	(c) Explain Structured, Semi structured and Unstructured data with suitable example in brief.	07
OR		
	(c) Differentiate (1) Apache Pig Vs Map Reduce (2) Apache Spark Vs Map Reduce	07
Q.3	(a) List down any 3 Hadoop's configuration files. Also explain in short.	03
	(b) How Hadoop 1.0 differs from Hadoop 2.0?	04
	(c) Write and Explain a 'WordCount' Java MapReduce program for having input Text: Rose red pink yellow white and peach Marigold orange or yellow Jasmine white Lotus pink and white Sunflower yellow Mogra pink purple yellow and white	07
OR		
Q.3	(a) What is full form YARN? Explain it in short.	03
	(b) Explain sharding process of MongoDB.	04
	(c) What is full form of RDD? Explain RDD operations in brief.	07
Q.4	(a) Explain Pig Data Model in short.	03
	(b) What is metastore in Hive. Explain it in short.	04
	(c) Justify the statement: Spark is faster than MapReduce	07
OR		
Q.4	(a) What is SQL?	03
	(b) What is NOSQL? How it differs from SQL?	04
	(c) Explain 'WordCount' Scala program for Apache Spark.	07
Q.5	(a) What is Zookeeper? Explain it in short.	03

- (b) Write a MongoDB query to demonstrate collection and document. **04**
- (c) Draw and discuss Hive architecture. **07**

OR

- Q.5**
- (a) Explain different components of HBase architecture in short. **03**
 - (b) What is the importance of HBase? **04**
 - (c) Explain MLib in detail. **07**
