GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VII (NEW) EXAMINATION – SUMMER 2024

Subject Code: 3170722   **Date:20-05-2024**

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

			MARKS
Q.1	(a)	Give difference between traditional data and big data.	03
	(b)	What is Big data Analytics? Explain any one case study of it.	04
	(c)	Explain 4 V's of Big data.	07
Q.2	(a)	List various configuration files used in Hadoop Installation	03
	(b)	How HDFS is different from traditional NFS?	04
	(c)	What is Hadoop? Briefly explain the core components of it.	07
		OR	
	(c)	What is MapReduce? Explain working of various phases of MapReduce with appropriate example and diagram.	07
Q.3	(a)	Discuss role of Data node and Name node in HDFS.	03
	(b)	Explain features and advantages of NoSQL.	04
	(c)	What is data stream mining? Explain stream data model and its architecture in detail.	07
		OR	
Q.3	(a)	What do you mean by job scheduling in Hadoop? List different schedulers in Hadoop.	03
	(b)	What is NoSQL database? List the differences between NoSQL and relational databases.	04
	(c)	Explain Counting oneness in a Window and Decaying Window of mining data stream in detail.	07
Q.4	(a)	Explain the Data Model of HBase.	03
	(b)	How HBase uses Zookeeper to Build Applications? Explain in detail.	04
	(c)	Explain Pig data Model in detail and Discuss how it will help for effective data flow.	07
		OR	
Q.4	(a)	Explain the HiveQL-Select-Order By with suitable example.	03
	(b)	Compare Hive and Pig query language.	04
	(c)	Explain briefly on Hbase architecture with neat diagram.	07
Q.5	(a)	Justify spark is faster than mapReduce.	03
	(b)	Define various Actions in Spark.	04
	(c)	Generalize how is data analysis used in a) Stock market predictions. b) Weather forecasting predictions.	07

OR

Q.5 **(a)** What are the components of spark? Also state the features of spark.   **03**

(b) What does a Spark Engine do? What is GraphX?   **04**

(c) What is RDD? State and Explain RDD operations.   **07**

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